

THE BOSTON Medical and Surgical JOURNAL

VOLUME 192

JANUARY 22, 1925

NUMBER 4

NEW ENGLAND SURGICAL SOCIETY

Session of 1924 at Hartford, Conn., September 26 and 27

DIFFICULTIES IN DISTINGUISHING BETWEEN URINARY STONES AND CALCIFIED ABDOMINAL GLANDS

BY ARTHUR L. CHUTE, M.D., BOSTON

THE X-ray has proved so dependable a help in the recognition and location of renal and ureteral stones that most of us seek its aid immediately the question of a urinary stone arises and accept its positive findings so implicitly that we may occasionally be misled unless we bear in mind that there are some conditions in which we must not accept even positive X-ray findings without applying certain confirmatory tests.

These limitations of what one might term simple radiography, in the case of suspected urinary stones, have been recognized for a considerable time, more especially as they apply to the lower course of the ureter, in the anatomical pelvis, where the difficulty of distinguishing between a shadow of a ureteral stone and a shadow of a phlebolith, a calcified internal iliac or a calcified gland has been pretty generally appreciated. The frequency with which shadows of calcified abdominal glands may simulate shadows of a stone in a kidney or a stone in the upper course of a ureter has been less well recognized, and for this reason it has seemed to me that the presentation of certain cases in which this question has arisen would be of interest.

Case I: One of my earliest experiences with this condition was in 1915, before I, at least, fully understood the limitation of radiography in the cases of suspected urinary shadows. The patient, a little girl of 13, came with a history of pain in her abdomen that she had had practically all her life. Sometimes it was worse when she played hard; at other times when her bowels moved. Her appendix had been removed two years before. Following this she had some relief for a time but her pain had returned and four months before I saw her, she was said to have passed bloody urine on two occasions. The week before I saw her she had had some pain on urination: this she had not had previously. X-rays had been taken and had shown a shadow on her *right* opposite the transverse process of the 4th lumbar vertebra. My notes stated that this shadow was not mottled and that I believed it was a stone in her

right ureter. A catheter specimen showed a slightly turbid urine. Another series of X-rays showed the same shadow in the same place.

With pain on her right side, slight tenderness, a history of hematuria, and the presence of a turbid urine containing pus, there seemed no doubt that we had to do with a ureteral stone and I did not think it necessary to have radiographs taken with a radiographic ureter catheter. An extra peritoneal incision was made, the ureter recognized, and a hard calcified mass found to the inner side of it. This mass was opened and some calcified material, as well as a part of the capsule was removed, and the cavity was drained with a small wick. The patient made a good recovery and was free of pain when she left the hospital. Six years later she returned because of pain in her right side; her urine was transparent; there was a small shadow on her right side but on this occasion it was *outside* the line of the ureter as shown by its relation to a radiographic catheter. The symptoms and findings in this girl's case presented a very suggestive picture of ureteral stone. The pain and tenderness, however, were due to inflamed retroperitoneal glands, probably tuberculous; the shadow assumed to be a stone was due to one of these glands in which calcification had taken place, a frequent end process in the healing of tuberculous glands. The turbid urine showed some pus, even in catheter specimens and may have been due to a slight pyelitis or to a cystitis, both common conditions in young girls as well as in older women. The hematuria may have been due to an acute pyelitis or possibly to an unrecognized menstruation or to some quite different and unusual condition. At any rate it was not due to the shadow that I took to be a stone. The one manoeuvre that would have given me the correct diagnosis, the taking of radiographs with a radiographic catheter in this patient's right ureter, I did not think was necessary to do since I felt so sure of my diagnosis. I regret that both the sets of plates taken of this girl in 1915 were destroyed in the frenzy to get rid of glass plates that swept through so many

of our institutions following the introduction of the flexible X-ray film.

Case II: Another case of special interest because operation verified the diagnosis was that

present pretty much all the time. She had lost some 10 pounds in weight in this six months. She had not had fever but had been nauseated though she had not vomited. Her urine had



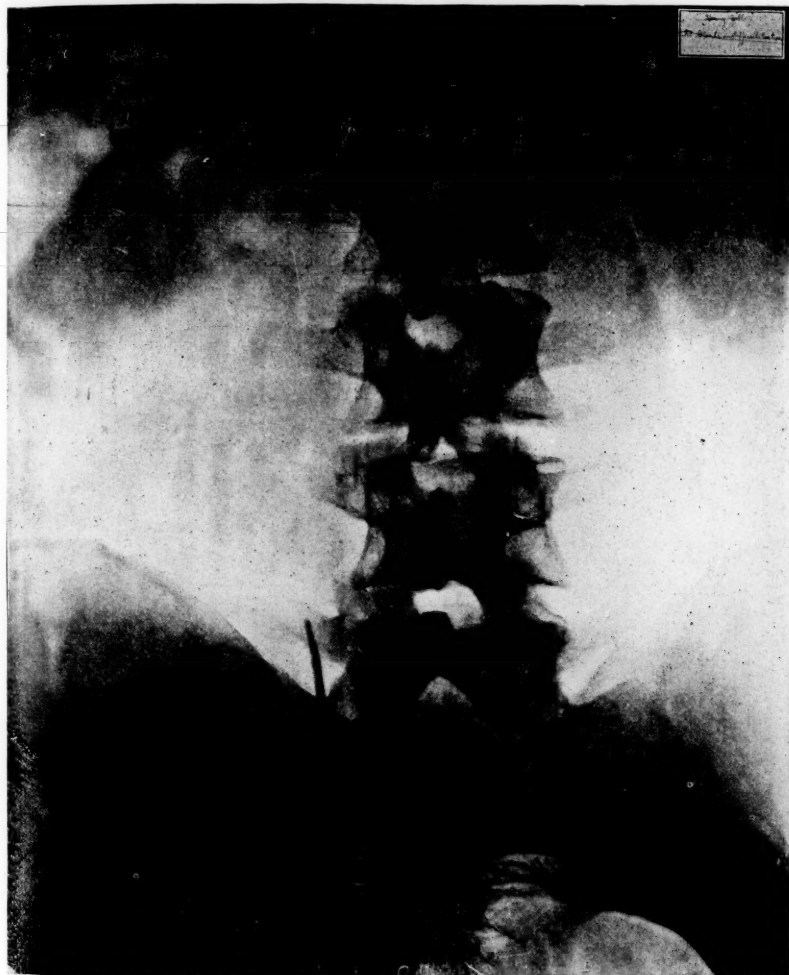
No. 1—Case II: Shadow on patient's right side between the transverse process of the 3d and 4th lumbar vertebrae, proven by operation to be a mass of calcified tuberculous glands. Diagnosis made from the X-rays alone; the irregular, granular, movable (as shown by another plate) shadow was typical of calcified tuberculous glands.

of a woman 26, seen in August 1922. She had never been robust but had never had any serious illnesses and had been rather stronger since her first child was born some four years previously. For six months she had had pain and tenderness in her right side; the pain was

shown nothing abnormal. X-rays taken six weeks before I saw her had shown shadows that I believed were without any doubt calcified abdominal glands, though the radiographer who took them had given his opinion that they were calculi and should be removed. This pa-

tient insisted that her doctor operate upon her, which he did, a month or more later, reporting to me that he had removed "eight mesenteric glands and the appendix, the lumen of which was occluded for about an inch at the tip."

twice and also influenza but had made good recoveries. His appendix had been removed $3\frac{1}{2}$ years before for rather vague symptoms. Since that time he had had constant pain in his back, more in his left side. He had had no urinary



No. 2—Case III: Showing calcified mass in region of the patient's left kidney.

There was no evidence of stone in the kidney or ureter and the surgeon wondered just how much good he had accomplished.

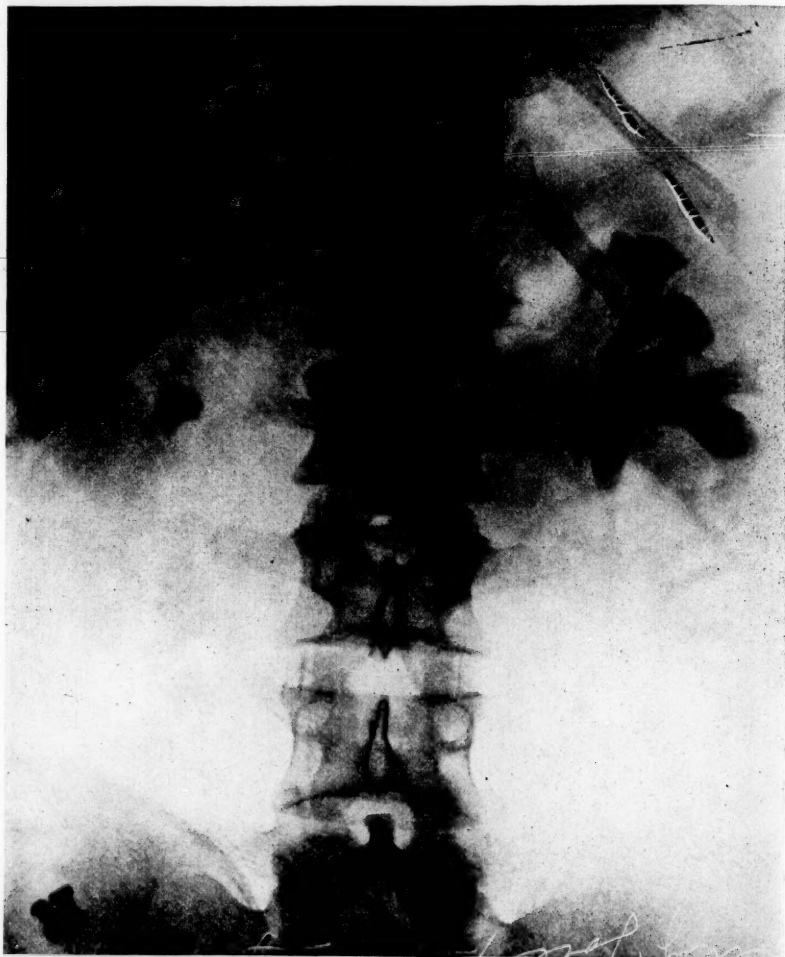
Case III: In January 1924, I saw a man of 28 who had been very athletic and who had a superb physique. He had had pneumonia

symptoms either subjective or objective. An X-ray taken because of the pain in his left back showed a very suggestive shadow in the general region of the left kidney, opposite the transverse process of the 2d lumbar vertebra. On the score of this shadow nephrolithotomy

had been advised. I was asked to see the patient and, because of lack of urinary findings and rather granular appearance of the shadow, suggested further study. On my first cystoscopy I did not succeed in getting a ureter

his left side, slightly overlying the filled kidney pelvis. The patient was advised as to the nature of his trouble and he was told that I could see no indication for operation.

Case IV: A woman of 39, seen early in the



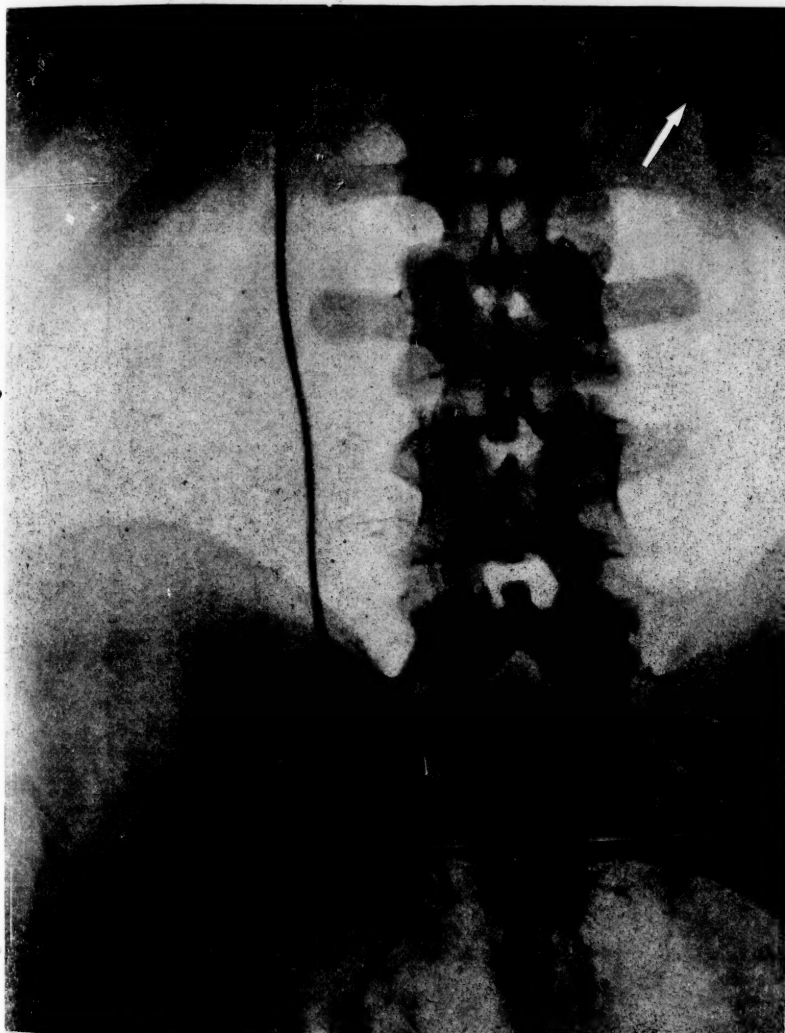
No. 3—Case III: Showing pyelogram of left side and shadow moved to right side.

catheter up his left ureter but X-rays showed the same shadow, seen in his earlier plates, in his left loin. The next day I catheterized his left ureter and made pyelograms; the shadow was found at this time in his right loin; on the next day more pyelograms were made of his left kidney and the shadow was seen back on

present year, gave the history of a miscarriage $4\frac{1}{2}$ years previously. Four months later she had what was probably an acute cystitis, that is, an attack of frequent and painful urination, which kept her in bed a good part of the time for three weeks. Three months before I saw her she had a similar attack which had cleared

up as regards the pain but she still had times when her calls to urinate were very imperative. Her urine was turbid and showed pus and oc-

were outside of the course of the ureter and one of them had a considerable range of motion. These shadows were undoubtedly calcified mes-



No. 4—Case III: Pyelogram of both sides with shadow of calcified gland overlying the trumpet-shaped part of the pelvis of the left kidney.

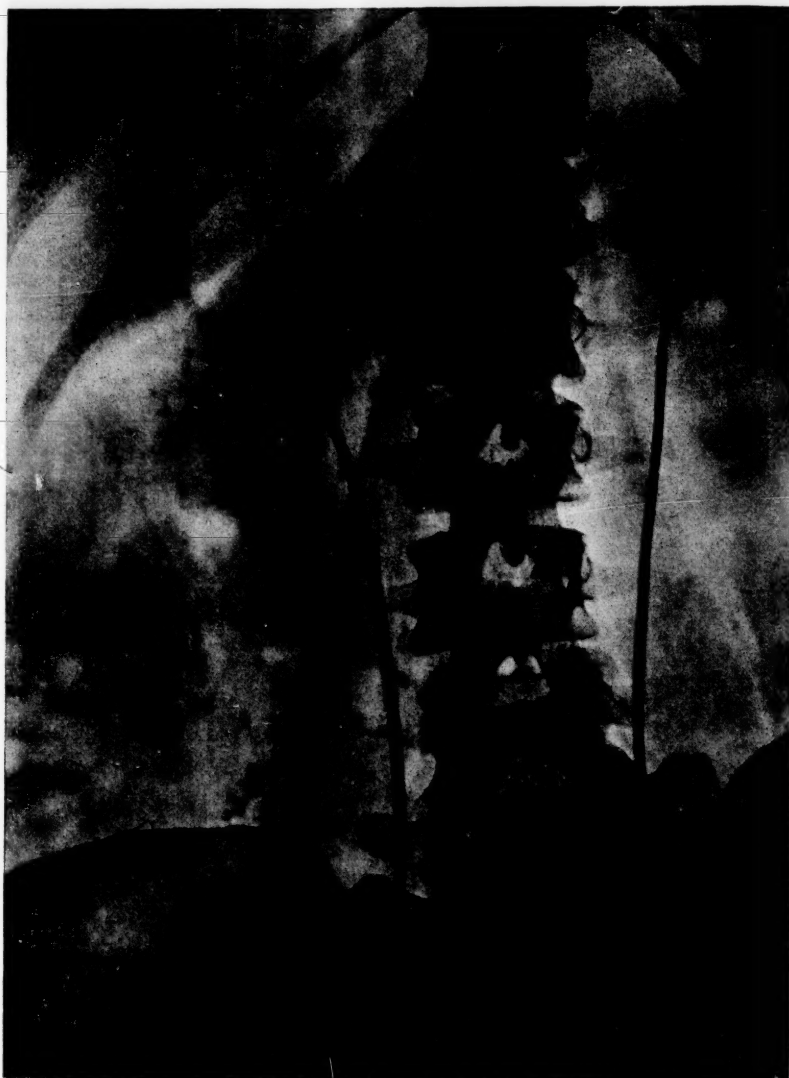
casional red cells. Cystoscopy showed evidence of a low grade cystitis and catheterization of her ureters showed an infection of her right kidney of a mild degree. Radiographs showed shadows in the right side of her abdomen: these

enteric glands. Following a few mild irrigations of her right kidney pelvis her urine became clear and her symptoms disappeared.

This condition I believe is not uncommon and the reported cases are fairly typical examples

of the condition as I have seen it. The patients for the most part fall into two groups when considered from the standpoint of the symp-

pain, usually referred to the back but occasionally to the abdomen. The type of this pain is such as we sometimes see with a more or less

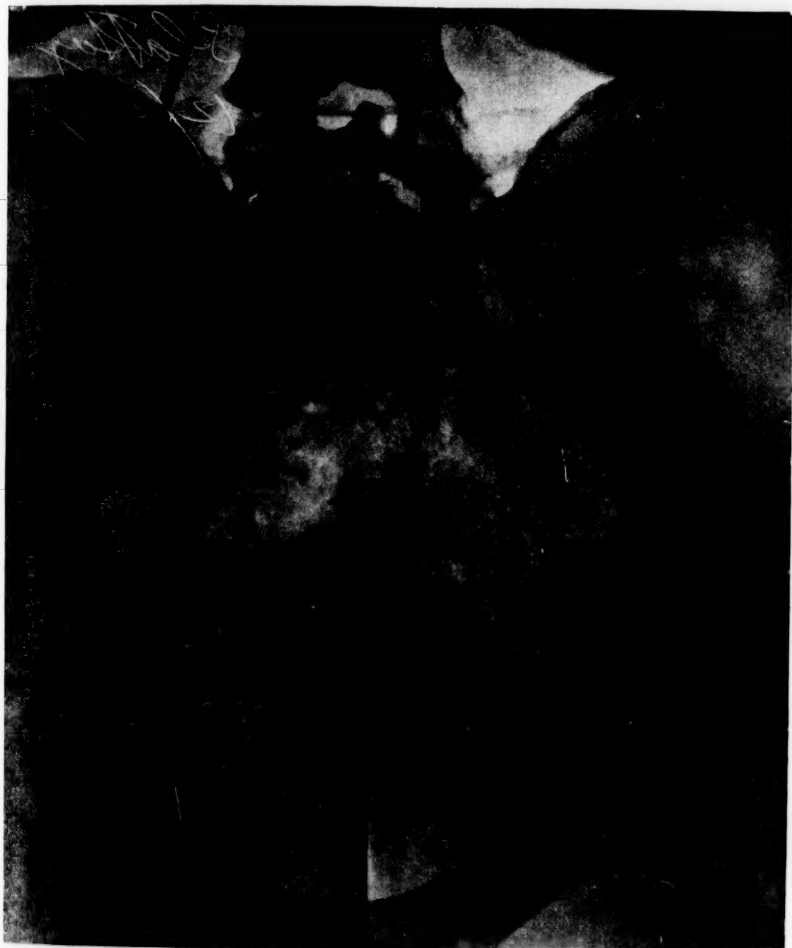


No. 5—Case IV: Showing typical calcifications to the outside of the transverse process of the 5th lumbar vertebra on this patient's right side, entirely outside the line of the ureter.

toms for which they seek relief. In the first chronic kidney stone, one that does not cause group, which is considerably the larger, are obstruction: this pain never has the intensity those who present themselves because of dull of true renal colic.

In the second group, which is somewhat smaller than the first, are those patients who present themselves because of definite urinary symptoms, such, for instance, as a turbid urine with or without bladder irritability, and who

which lead naturally to X-ray investigation and the finding of the calcified areas. In the second group there has been, with one exception, no relation whatever between the urinary symptoms from which these patients suffered



No. 6—Illustrating a frequent finding, a shadow in the anatomical pelvis which raises the possibility of a stone in the ureter, proven by the shadow-casting catheter to be well outside the line of the ureter. The granular condition makes it much more likely that it is a calcified mesenteric gland than a calcified vessel or phlebolith.

are found on investigation to have a renal infection such as one occasionally sees with a silent stone. A few patients present themselves with a combination of pain and urinary symptoms. In other words these patients come with atypical or mitigated symptoms of stone

and the calcified areas found on radiography. They are patients with pyelitis, in the investigation of whom calcified glands have been found. The exception that I mentioned applied to a patient who had a renal tuberculosis, as well as calcified abdominal glands, presumably

tuberculous. There is no reason why a true renal or ureteral stone should not be present in a patient showing calcified abdominal glands; in fact this is seen occasionally but there is ordinarily no insuperable difficulty in distinguishing between the two conditions. Fever has not been a marked symptom in these cases; in fact it has been noted in only a very few, in only two of the sixteen cases whose histories I went over with this point in mind. However, as many of these patients were not in the hospital for study and investigation, this observation probably has little value.

The pain that these patients have is, to my mind, not to be attributed to the calcified glands themselves but to the other glands that presumably accompany the calcified ones and are still in the more acute stages of inflammation: glands in which calcification has not yet taken place. The calcification represents the end result in nature's attempts to cure certain gland infections, especially tuberculous infections: these calcified glands are quiescent and are presumably painless. The presence of these calcified areas is simply presumptive evidence of the presence of other glands that are still more or less acutely inflamed and painful. The fact that the glands which we see in the radiographs are not the glands that are presumably causing the pain is a strong argument against any attempt at their surgical removal.

Two sets of glands seem to be involved in these cases: those that are in the mesentery and those that are behind the peritoneum. If a calcified gland is seen to move through a considerable area in a series of radiographs, it is probable that it is a mesenteric gland. If a calcified gland is found to be fixed, it may belong to the retroperitoneal group, which seem to be fixed, or it may be situated in a part of the mesentery that allows of little mobility. I do not know that there is the slightest clinical importance to be attached to whether a calcified gland belongs to the mesenteric or retroperitoneal group.

The differential diagnosis between a calcified gland and a renal stone is usually relatively easy: if there is a normal urine there can be little likelihood of a shadow being in the urinary tract, though this is not without its exceptions. On the other hand the presence of an abnormal urine must not be taken as definite proof that a shadow is in the urinary tract; some patients have a pyelitis and a calcified gland as well. As a rule the shadow of a calcified gland is mottled or irregular in outline, while the shadow of a stone is seldom mottled and is more often of regular outline. In a considerable proportion of cases the shadow of a calcified gland will be found to vary its position in a series of radiographs. A considerable proportion of the shadows due to calcified abdominal glands will be found to answer both these tests; that is, they will present a mottled

appearance and show a definite mobility. I do not now remember any instance where a shadow of this sort proved to be renal stone. When the retroperitoneal glands are involved and a chain of these accompany the ureter from the pelvis to the kidney, there is little change in position of the shadows in different plates. The relation of these shadows to that of an inlying ureter catheter will usually make the condition evident but if any doubt exists, a stereoscopic plate will settle the question.

When an immovable shadow occupies the general region of a kidney, it may be found that on deep inspiration the kidney outline will change its relation to that of the shadow, indicating that the shadow is extra renal.

One occasionally sees in a hydronephrosis a little mottled area due to a collection of small stones in the hydronephrotic sac; this might be confused with the mottled shadow of a calcified gland though I do not now remember an instance where this has come up. The finding of a large residual in the pelvis of such a kidney or the demonstration of a hydronephrosis by pyelograms would distinguish between this condition and a calcified gland. There will ordinarily, however, be little difficulty in distinguishing between the shadow of a calcified abdominal gland and that of a urinary stone, once the question has been raised in the surgeon's mind.

SUMMARY

In carrying out radiographic investigations on patients whose symptoms suggest the possibility of renal or ureteral stones, we often find shadows that are due to calcified abdominal glands. Usually these shadows can be easily distinguished from urinary stones by their mottled appearance and mobility. Occasionally the radiographic catheter, with or without stereoscopic plates, will be necessary to tell whether a given shadow is in a ureter or not. Rarely a pyelogram may be necessary to determine whether a given shadow is in a kidney pelvis or whether it is extra renal. The condition does not call for operative treatment.

DR. S. A. MAHONEY, Holyoke: I was very much interested in Dr. Chute's paper simply because it trod on unknown ground to me, and when I was asked to discuss the paper, it made me go and hunt up things that I had not looked over for many a day. I went into my library and pulled out a book by Deaver who is the author of a treatise on anatomy, and in that anatomy there are excellent plates of the lymphatic system of the pelvis, and I then went to an X-ray friend of mine and asked him to look up all the plates in which there was doubt what the spot on the celluloid plate indicated, whether a stone in the ureter or a calcified gland, and then it was hard to make me think the spot on the celluloid plate represented the glands in the pelvis or in the mesentery.

However, a man consulted me a while ago with urinary symptoms referable to the left urinary tract, and in the X-ray plates taken of that man a spot appeared low down in the pelvis which we decided was a stone in the ureter. Dr. Chute's statement that the mottled appearance

pearing on celluloid plates which make it difficult for the surgeon to tell whether he is dealing with something in the urinary tract or some extraneous thing not connected with it. (Plate) There is the spot that appears on the X-ray plate (showing). After we got the gen-



FIG. 1. Shadow about the size and shape of an olive stone lies in the region of the right ureteric orifice. Opaque catheter in ureter shows the shadow to be outside of the ureter.

is a deciding point is something new to me, and possibly we might have decided from that. But I brought down the plates with me, hoping to get some information. The case is still "sub judice," the man has decided not to be operated upon while there is doubt whether this spot represents a stone or a calcified gland or sessamoid bone or something else. (Showing plate.) Certainly there are lots of spots ap-

pear on account of its peanut shaped appearance. The consensus of opinion was that it is something not connected with the urinary tract, or possibly a stone in a diverticulum of the bladder. It has the appearance of a ureteral stone. The consensus of opinion was that it is something not connected with the urinary tract, or possibly a stone in a diverticulum of the bladder. It has the appearance of a ureteral stone.

There is a question whether the shadow is mottled. This shows how difficult it is for the general surgeon to decide these problems.

DR. J. D. BARNEY, Boston: I was very much interested in Dr. Chute's presentation of a subject which I think offers difficulty to all of us. I have two or three plates of my own which show that mistakes in diagnosis are undesirable to say the least. (Showing plate.) This is the

I operated upon this patient, explored him carefully and found no stone in the ureter. I opened the bladder at this time and was able to pass large bougies and then a ureter catheter up the ureter with no difficulty at all. I had an X-ray taken before sending the patient to the ward (showing plate) and this shows that the shadow which was thought to be a stone in the ureter, is lying about an inch away from the ureter and has no relation to it. Fig. 1.

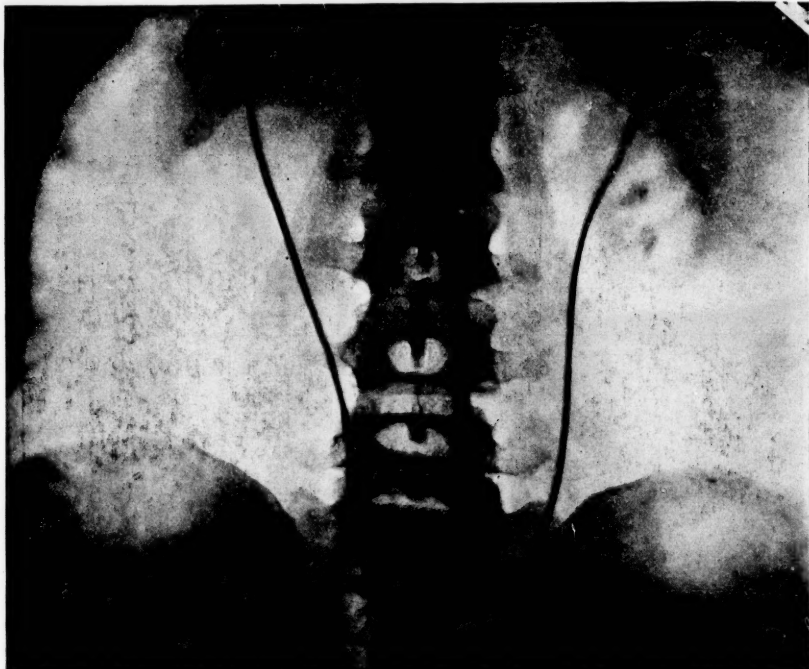


FIG. 2. Two irregular shadows lying over the area of the right kidney. After pyelogram was made the kidney pelvis was found to be normal; the two shadows had moved so as to lie over the transverse processes of the second and third lumbar vertebrae.

case of a middle-aged man who came in with symptoms of renal colic, pain on the right side, nausea and vomiting and with pus in the urine. The X-ray showed this shadow which resembles a ureteral calculus. It does not look like a calcified mesenteric gland in that it is fairly homogeneous in density and not ragged in outline. Three of us cystoscoped the patient but none of us were able to pass a catheter into the right ureter for more than about an inch. No urine could be obtained from the right kidney. The only thing we all omitted to do—and this was the most important—we did not pass a catheter with a wax tip. It was so obviously a case of ureteral calculus that we were careless.

It is probably a calcified retro-peritoneal gland. The unfortunate part of the case is that the patient had an extremely long and stormy convalescence, his bladder did not close for several weeks and I finally ended up by having to remove the prostate.

In this plate here (showing plate Fig. 2) are two shadows overlying the kidney area, in a young man, with some pus cells in his urine and several attacks of severe right-sided pain, accompanied by nausea and vomiting. A pyelogram was done showing a normal renal pelvis. The two shadows could not be seen at first but on careful inspection you can see them overlying the transverse process of these two lumbar

vertebrae. This very mobility makes the diagnosis of glands clear.

Last year we kept accurate record of our pre-operative diagnostic errors and found that we were mistaken in only 4%. The first case of which I spoke is one which will help to make up this percentage.

This case (showing plate) presented some

fat. Various plates were taken; all have shown these two shadows on the left side, opposite the transverse processes of the second and third lumbar vertebrae and overlying the kidney shadow. They have been in the same position in all the plates. A pyelogram shows Fig. 3 that the lower shadow is below and outside of the kidney shadow and is undoubtedly

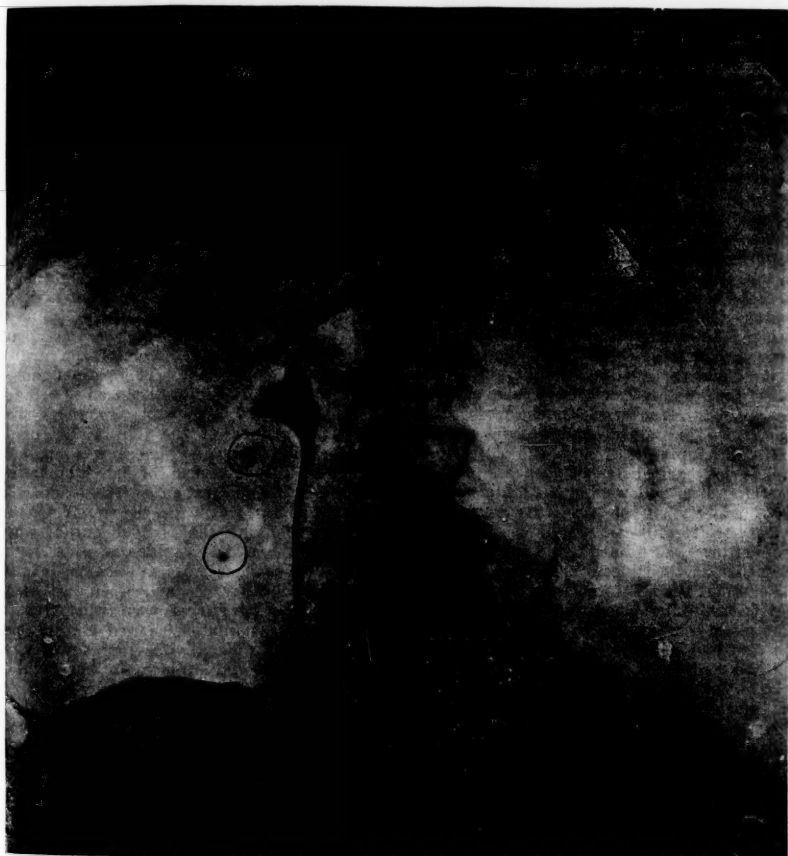


FIG. 3. Pyelogram of left kidney. This was taken after a good deal of the sodium iodide had been withdrawn. The two shadows indicated are confusing. The lower one is definitely outside of the kidney shadow and is not a stone. The upper one lies persistently over the kidney shadow and is covered by the injected lower calyx. It is probably a calculus in the lower calyx.

difficulties also. This is a young married woman of 30, weighing 195 pounds, five feet tall and about four feet wide, with diabetes. She had had several attacks of severe left-sided renal colic with more or less elevation of temperature and some pus in the urine. I was unable to palpate the kidney and it has been hard to get a good X-ray on account of her

a calcified gland; the upper shadow is covered by the pyelogram. Careful inspection shows that there is a filling defect in the lower calyx, which may be due to the fact that there is a stone in the lower calyx after all. It is a questionable case as yet and more data must be gathered. She would be an extremely difficult and bad case to operate upon and one can read-

ily see the desirability of making an accurate preoperative diagnosis.

DR. SAMUEL C. HARVEY, New Haven: There is one maneuver which hasn't been mentioned but is worth adopting. In this case in point, a girl 12 years old, the roentgenologist reported shadows over the kidney. A lateral view was taken of these shadows, and the shadows in the mesentery lie anterior to the vertebrae,

whereas shadows in the kidney lie within the shadow of the vertebrae.

I have nothing to add except to say that if one will bear in mind that a calcified gland may simulate a renal or ureteral calculus once the question is raised there will rarely be any great difficulty in distinguishing between them. Dr. Harvey's suggestion, I think, would be helpful in distinguishing between a calcified gland and a stone; I have never tried it.

URETHRAL PROLAPSE IN WOMEN: AN INDICATION OF BLADDER DISEASE

BY ARTHUR L. CHUTE, M.D., BOSTON

THE following cases are reported to illustrate the diagnostic significance that is sometimes to be attached to a prolapse of the urethral mucosa in women. In the reported cases a little prolapse of the urethra, due to bladder irritation and the consequent straining on urination, was evidently mistaken for a caruncle, and removed on the assumption that it was the cause of the patients' symptoms, rather than the result. The real cause of the symptoms in these cases was malignant disease of the bladder.

The first case is that of a woman of 53 seen March 28, 1921. In the summer of 1920 she complained of painful and difficult urination which was supposed to be due to a "caruncle" which was excised in October of that year. Operation was followed by inability to empty her bladder that persisted for some weeks. Somewhat later, because of difficult urination, her urethra was dilated and curetted, follow ing which she had incontinence for a time.

For some weeks before I saw this patient she had been passing blood and having her urine shut off at times while in the act of voiding; she also had had several retentions for which she had had to be catheterized. The patient was very thin and looked very frail; she had lost much weight. There was moderate prolapse of the urethral mucosa. A catheter was passed to her bladder without difficulty and showed a large amount of bloody residual. After catheterization she passed pure blood; the bleeding was too great to allow of cystoscopy. There was typical infiltration of the bladder base as well as glands in her groins. Her doctor was advised that she had malignant disease of the bladder, so advanced that little was to be expected from operation, and that it would be best to begin the use of morphia and to catheterize the patient when necessary; that it might, however, become necessary to do a cystostomy. The patient died about two months later.

Case II. A multipara, 58 years old, seen July 31, 1923. She had been curetted in 1909, and had always been very neurotic, but otherwise her history was negative. She thought she

passed a few drops of blood in January, 1923, also a little on two occasions in April. At that time a small "caruncle" was removed, and in May she again saw blood on two occasions. She then saw no blood for a period of 6 or 7 weeks, but there had been a recurrence a month before I saw her and considerable bleeding the week before she came. There was no pain at first but for a time she had had an uncomfortable feeling in her pelvis, as though she was about to menstruate. She had discomfort on urination referred to her left side. This patient showed a little prolapse of her urethra and a urine that was transparent. Cystoscopy showed a shaggy papillary growth at the top of her bladder, pretty well forward. There was no definite evidence of involvement of the lymphatics; I could feel no infiltration of the bladder base. The large mass, which was the size of my thumb and over-hanging the bladder outlet, was removed through a suprapubic incision, together with three smaller masses. She made an uneventful convalescence and when last seen, in April, 1924, her urine was transparent and cystoscopic examination showed nothing abnormal in her bladder. She did, however, complain of pain and soreness in her right side for which I was unable to find any cause.

Case III: A nullipara, 60 years old, seen October 3, 1923. Her history was that she had had pain in her left side all her life. In 1918 she had an abdominal operation, the nature of which she did not know, but she thought "the appendix and probably a tube and ovary were removed." She was in the hospital for nine weeks and had a discharging abdominal sinus for six months after going home. In March, 1923, she had a caruncle the size of a pea and two smaller ones removed because of her urinary pain and frequency. She had a little relief temporarily, but the trouble soon returned and she was advised to have a cystoscopy. When I saw her she was having a good deal of pain and frequency; it hurt her to sit down, and she said she passed clots at times. There was a scarring of the meatus, the result of the removal of the "caruncles." Her urine showed a little pus and blood. Cystoscopy showed a

large, irregular tumor below and behind, which at points had the appearance of a papilloma; there was infiltration of the bladder base. I advised the removal of the growth, if possible, and the use of radium. In attempting to open the bladder suprapubically I opened into the peritoneum, where I found a large tumor mass behind and adherent to the bladder; its origin was not evident. This mass was opened during my investigation and a considerable amount of papillomatous material was scooped out. The bladder was then opened and much more of the same material removed. There seemed little doubt that the tumor invaded the bladder from without. Because of the proximity of adherent intestinal coils, no attempt was made to implant radium, but the bladder and pelvis were drained by tubes and wicks. On the third day intestinal gas was passed through the incision. The patient failed steadily and died six days after operation, apparently of a localized peritonitis and exhaustion. No autopsy was obtained. The growth was a colloid carcinoma, having its origin somewhere in the pelvis, and invading the bladder from without.

In these cases I have considered the urethral condition as a prolapse rather than as a caruncle and perhaps unfairly so, as I did not see these patients before their first operations. There is, I find, a great tendency to use the word "caruncle" for any abnormal bulging of the urethral mucosa into the meatus. I have had a considerable number of patients referred for an opinion as to the wisdom of removing a urethral "caruncle" who presented a prolapse of the urethra, due to something that has caused straining on urination. The term, caruncle of the urethra, I believe, should be limited to the little raspberry-like growths that we see from

time to time at the meatus. They are true papillomas of the urethra and produce stinging on urination, occasionally a little urethral bleeding and sometimes even a little urethral discharge; so far as I know they rarely, if ever, produce marked symptoms of bladder irritation or any considerable amount of bleeding. It is my opinion, from the history of these patients, and from the finding of more or less prolapse of the urethral mucosa at the time I saw them that at the time of their operations they presented prolapse of the urethra rather than true caruncle.

But whether these patients presented a caruncle or a prolapse of the urethra, the point I wish to make is the same: that one should be very cautious how one accounts for marked urinary symptoms in women by the presence of a relatively minor urethral lesion, such as a prolapse of the urethra or a caruncle. Cases of this sort should be subjected to a careful cystoscopic examination before any operation is carried out. In cases where the basic trouble is a self limited inflammatory lesion of the bladder the patient will often improve so much during the convalescence following the operation for the removal of the urethral lesion as to make it seem probable that the relief depended upon the operation. In cases where the bladder lesion is a serious one such as a growth, valuable time will be lost.

Summary: It is unwise to account for marked urinary symptoms in women by the presence of a prolapse of the urethra or even a caruncle unless a careful cystoscopic examination has been negative; often the urethral condition is simply symptomatic of serious bladder disease.

ORIGINAL ARTICLES

SOME OBSERVATIONS UPON THE GLYCOSURIA OF PREGNANCY

BY JOHN T. WILLIAMS, M. D., F. A. C. S.

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ALTHOUGH the existence of a physiological glycosuria in certain pregnant women has been known for many years it has only recently been made the object of intensive study. A sugar reaction was obtained from the urine of nursing women by Blot¹ in 1856. Hofmeister² in 1877, and Kaltenbach³ in 1879 showed this definitely to be lactose. In 1895 Lanz and v. Jaksehl⁴ showed that glycosuria could more easily be produced during pregnancy.

Payer⁵ in 1899 experimented upon 45 pregnant women, producing an alimentary glycosuria in 50% by feeding 50 grams of glucose, and in 100% of those who were given 200 grams of glucose. Frank and Nothmann⁶ showed that 100 grams of glucose upon the fasting stomach

caused in pregnant women glycosuria without increase in the blood sugar (renal diabetes), and suggested the use of this method as an aid to diagnosis in early pregnancy.

Williams⁷ found among the records of urinary analysis in 3000 consecutive patients at the Johns Hopkins Hospital that 24 cases or 0.8% showed a sugar reaction during the last weeks of pregnancy. Six or 0.2% showed a reaction during both pregnancy and the puerperium, and 137 or 4.57% during the puerperium only. These last however were all due to lactose. Novak, Porges and Strisower⁸ also demonstrated during pregnancy a glycosuria unassociated with an increase in blood sugar.

Joslin⁹ states that small quantities of sugar

are frequently found in the urine of pregnant women and are of little significance, but that larger amounts are of grave import and that such patients should be followed up carefully to watch for the later development of true diabetes.

Ryser¹⁰ in 1915 showed that the subcutaneous injection of adrenalin would produce glycosuria in pregnant but not in non-pregnant women. This observation has been confirmed by Brintzer¹¹ and others.

The tendency of most writers on this subject has been to confuse the glycosuria of pregnancy with the lactosuria of the puerperium on the one hand or with true diabetes on the other. The physiological glycosuria of pregnancy is an entity separate and distinct from either. My interest in this subject began about three years ago and has been exercised in the study of the urine in a series of private patients during pregnancy. In this series I have included only those cases coming to my office for study at regular intervals during pregnancy, and have excluded all consultation cases not under my direct observation during pregnancy and those patients coming to me for the first time toward the end of pregnancy.

The patients from whom the statistics to be given were taken were five hundred in number. They came to delivery between Jan. 1, 1922, and May 15, 1924, but the actual observations were begun about July 1, 1921, and were continued up to July 1, 1924. The urine of these patients was examined for sugar monthly up to the end of six months and then at intervals of two weeks during the remainder of the pregnancy. Fehling's method was used. All those having a positive reaction were fermented. Not a single specimen taken during pregnancy showed the persistence of a sugar reaction after fermentation, demonstrating that the sugar found in the urine during pregnancy is always glucose.

It was difficult to obtain satisfactory specimens immediately after delivery without the use of the catheter, but in twenty patients in whom a clear specimen could be obtained on the third or fourth days postpartum ten showed a positive sugar reaction. With one exception these reactions persisted after fermentation, showing that the sugar found during the establishment of the milk secretion is practically always lactose. Reactions were occasionally found later in lactation but these were always faint and disappeared after fermentation. One patient proved later to have diabetes but with this exception all the sugar reactions disappeared before the patients were discharged from observation, a period varying from one to two months postpartum.

STATISTICS

	Total No.	Showing Sugar Number	Percent
Primigravidae	262	46	17.5
Multigravidae	238	22	9.2
Total patients	500	68	13.6

EFFECT OF AGE OF PATIENT UPON GLYCOSURIA

	Total	Showing Sugar Number	Percent
Primigravidae			
20 or under	19	2	10.5
21 to 30	211	37	17.5
31 to 40	31	7	22.5
Over 40	1	0	0
Multigravidae			
20 or under	0	0	0
21 to 30	149	15	10
31 to 40	83	7	8.2
Over 40	6	0	0

TIME OF APPEARANCE OF GLYCOSURIA

	Patients	Percent
During the second month	0	0
During the third month	1	1.4
During the fourth month	4	5.8
During the fifth month	8	11.7
During the sixth month	12	17.6
During the seventh month	18	26.4
During the eighth month	11	16.2
During the ninth month	14	21.1

INTERPRETATION OF STATISTICS

Glucose was found in the urine of 13.6% of 500 gravidae. It was more commonly found in primigravidae (17.5%) than in multigravidae (9.2%).

It was found four times as commonly in the second half as in the first half of pregnancy. (It was seldom constantly present after its first appearance being found at some examinations but not at others.)

In primigravidae the incidence of glycosuria seemed to increase with the age of the patients. In multigravidae there was apparently no difference made by age. (This discrepancy leads one to believe that a larger number of cases might give different results one way or the other.)

CAUSE OF THE GLYCOSURIA

Novak, Porges and Strisower⁸ showed that the glycosuria of pregnancy is not accompanied by an increase in blood sugar and is therefore a renal glycosuria. They attributed it to increased permeability of the renal epithelium.

Keim¹² and Hofbauer¹³ ascribe the glycosuria to hepatic insufficiency. Their theory is that the well recognized strain upon the liver during pregnancy interferes with its glycogenic as well as its other metabolic functions.

The pancreas, important sugar controlling organ that it is, can be only indirectly concerned in the glycosuria of pregnancy because there is no increase in blood sugar. In other words pancreatic function during pregnancy seems to be normal.

The thyroid has been accused by Schroeder¹⁴ as the cause both of glycosuria and toxemia of

pregnancy. The corpus luteum has been claimed as the cause of the glycosuria by Kustner¹⁵.

Erdheim and Stumme¹⁶ have demonstrated hypertrophy of the pituitary body during pregnancy. Cushing¹⁷ believes that the glycosuria of pregnancy is due to this transient hypertrophy of the pituitary. This latter theory appears to the writer to be the most logical. The increased activity of the pituitary during pregnancy is established beyond question. The posterior lobe influences both the sugar function and the action of the uterus. Increased activity of the posterior lobe causes an elimination of sugar in the urine. The posterior lobe is especially active during pregnancy. It is reasonable to assume then that the necessary physiological increase in function of the posterior lobe during pregnancy must incidentally result in a change in the sugar metabolism as well.

The glycosuria is most frequently found in the latter part of pregnancy when the pituitary hypertrophy is at its height. It disappears when the pituitary involutes after delivery. In the complex interrelationship of the ductless glands no doubt the function of the liver and perhaps other hormone producing organs is concerned in some more or less important way but from the evidence at hand it may be logically concluded that the primary cause of the physiological glycosuria of pregnancy is the normal transitory hypertrophy of the posterior lobe of the pituitary body during pregnancy.

CONCLUSIONS

1. Sugar was found in the urine of 13.6% of 500 pregnant women at some time during pregnancy.

2. It was found more commonly in primigravidae than in multigravidae.

3. In primigravidae its incidence seemed to increase with the age of the patients. In multigravidae no difference was observed.

4. It was found more commonly during the second half of pregnancy.

5. The sugar found in the urine during pregnancy is always glucose and not lactose. Lactose however is present in the urine of a considerable proportion of nursing women during the period of breast engorgement.

6. The ordinary glycosuria of pregnancy is physiological only and disappears after delivery.

7. The glycosuria of pregnancy is a renal glycosuria not being accompanied by any increase in blood sugar.

8. The physiological glycosuria of pregnancy must be differentiated from diabetes with which it has no connection. This can be done by determination of the blood sugar and by follow up work.

9. The physiological glycosuria of pregnancy is the result of the normal hypertrophy of the posterior lobe of the pituitary body during pregnancy. Increased activity of the posterior pituitary lobe causes glycosuria during pregnancy just as it does when due to pathological causes, (tumors, etc.) After delivery as the pituitary involutes the glycosuria disappears.

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THE STANIFORD STREET DISPENSARY*

BY JOHN W. FARLOW, M.D.

For forty or more years, the part of Staniford Street of which I propose to speak was the seat of medical instruction to students and doctors, and medical relief was given there to thousands of women and children. The extent to which the Shattuck family have been benefactors to the community is not known as it should be, and I have felt that it might be appropriate to place on record what I know of the story of the Staniford Street Dispensary and its relation to Dr. George C. Shattuck. Although more or less private in character, the medical clinics which I shall describe had a loose con-

nection with the Harvard Medical School and later with the Boston Polyclinic.

The large house on the westerly corner of Staniford and Cambridge Streets, owned for nearly a century by the Shattuck family, is still in their possession. Dr. George C. Shattuck (1783-1854), A. B. Dart. 1803; M. B. Dart. 1806 and M. D. Univ. of Pa. 1807, lived there for many years until his death in 1854. His son, Dr. George C. Shattuck, Jr. (1813-1893), A. B. Harv. 1831 and M. D. Harv. 1835, lived in the adjoining house No. 15 Cambridge St., and there his sons, Dr. George B. Shattuck and Dr. Frederick C. Shattuck, were born.

*Read at a meeting of the Boston Medical History Club, November 17, 1924.

Dr. Shattuck, Sen., was a busy practitioner, lecturer in the Harvard Medical School and President of the Massachusetts Medical Society. The son was a Professor in the Medical School

in appearance in recent years by the addition of the fire-escapes and stores. The house was No. 2 Stanford St. and in connection with it, having an entrance from the garden, was an of-



FIG. 1.—Large house on left is where Dr. George C. Shattuck lived.

for nearly twenty years and also Dean of the Faculty, so that the house must have been a well recognized medical centre.

The photograph, Fig. 1, shows the home of the elder Shattuck, much changed for the worse

face building numbered 2½. A little farther down the street was an entrance which led on the right to the doctor's stable, over which was a dissecting room. On the left of the entrance was a small building also serving as a place for

dissecting. These latter must have been of considerable value at that time, when the teaching of practical anatomy was not under the related on excellent authority that he once drove in a sleigh in winter to Hanover, N. H., taking a body in a barrel as a present to Dr.



FIG. 2.—Stanford Street, Boston, April, 1919.

The second house from the left, where there is a white sign to the right of the door, was the Dispensary for Diseases of Women and Children, 1873 to 1897.

Dr. George C. Shattuck owned the building and had a clinic there.

Dr. Charles P. Putnam had a children's clinic and Dr. James R. Chadwick and Dr. John W. Farlow clinics for diseases of women from 1873 to 1890.

protection of the law. The anatomical material was obtained by "arrangement" with the Almshouse people and the younger Dr. Shattuck sometimes went after it himself. It is Muzzey, Professor of Anatomy and Surgery at Dartmouth, a valuable gift undoubtedly much appreciated by the recipient. In these dissecting rooms anatomical and pathological

specimens for the use of students were prepared and also preserved in alcohol. The proximity to the dissecting rooms was said to be an important factor in the unusually flourishing condition of the large garden.

After the death of the elder Shattuck in 1854, his widow continued to live at No. 2 Staniford St. until her death, but the office, No. 2½, was used by the son as his office, his residence then being at No. 15 Pemberton Square.

In about 1866 the stable and dissecting room were taken down and replaced by a three-story building, the lower part used as a dispensary and the upper as bedrooms. Between this dispensary building, No. 18, and the doctor's office, No. 2½, several dwelling houses were built, which are shown in the photograph, Fig. 2. The Dispensary is the building where there is a white sign on the brick wall to the right of the front door. These photographs were taken in April, 1919, when the house was used, as the sign states, as the West End Community House.

Dr. Shattuck, Jr., was Professor of Clinical Medicine in the Harvard Medical School from 1855 to 1859 and of Theory and Practice from 1859 to 1874, as well as Dean of the Faculty from 1864 to 1869 and had always been much interested in the education of medical students. In the Harvard Medical Alumni Association Quarterly, Jan., 1904, Dr. R. C. Cabot says: "The Clinical Conference is first mentioned in the Harvard Medical School Catalogue of 1862-63, that is, about the middle of Dr. H. I. Bowditch's term as Professor of Clinical Medicine. It appears, however, that an exercise more or less similar had previously been held by Dr. G. C. Shattuck at his rooms on Staniford St. Dr. Shattuck's exercises were not a stated part of the Medical School instruction and so are not referred to in the catalogue, but as the School was still a proprietary institution, the distinction between stated and private instruction was not sharp."

It would seem from this, as well as from general hearsay, that considerable instruction was given here for many years.

At the close of the Civil War, in the winter of 1867-68, a number of young men, who had served in the war as surgeons, physicians or health officers, came together and, with the co-operation of Dr. Shattuck, at that time Dean of the Harvard Medical School, drew up the following list of courses to be given at No. 2½ Staniford St.

Recitations are held at No. 2½ Staniford St., as follows:

Monday, January 6, and on alternate Mondays
Bandaging and Diseases of the Ear

Dr. Francis H. Brown

Monday, Dec. 2, and alternate Mondays, at
7.30 P. M.

Anatomy, Dr. C. B. Porter

Tuesday, Nov. 12, and alternate Tuesdays,
at 7.30 P. M.

Midwifery, Dr. A. D. Sinclair

Tuesday, Dec. 3, and alternate Tuesdays, at
7.30 P. M.

Ophthalmology, Dr. H. Derby

Wednesday, Nov. 13, and alternate Wednesdays, at 3.30 P. M.

Pathological Anatomy, Dr. C. W. Swan

Wednesday, Nov. 20, and alternate Wednesdays, at 3.30 P. M.

Thoracic and Abdominal Diseases

Dr. Francis C. Ropes

Wednesday, Dec. 4, at 7.30 P. M.

Laryngology, Dr. H. K. Oliver

Thursday, Nov. 14, and on subsequent Thursdays, at 7.30 P. M.

Surgery, Dr. John Homans, Jr.

Friday, Dec. 6, and on subsequent Fridays, at
7.30 P. M.

Materia Medica, Dr. Fitch E. Oliver

Friday, Dec. 13, and on alternate Fridays

Syphilis, Dr. Wm. F. Munroe

Saturday, Nov. 30

Thoracic Diseases and Exploration

Dr. H. I. Bowditch

These exercises are voluntary and are especially designed for advanced students and those desirous of being examined in the Spring for their degree.

All these men were graduates of the Harvard Medical School and nearly all of Harvard College. The courses had two objects: 1, to help the students pass their examinations for a medical degree; and 2, to give the younger medical men opportunity to show and improve their ability as teachers. Dr. Shattuck favored their plan, as is evident from his placing his office building at their disposal.

The scheme excited the suspicion of the Faculty of the Medical School and they sent a letter of inquiry, asking about the nature of the proposed plan.

To this the following reply was made in a letter signed by Dr. A. D. Sinclair and three others:

To the Medical Faculty of Harvard College,
Gentlemen:

We, the undersigned, are desirous of holding a series of "Quizzes" during the coming winter term of the Medical School. Knowing that for the past few years and especially during the last course of lectures, recitations in this form were well attended, and feeling assured that exercises under the open and avowed approval of the Faculty would be more generally sought and more fully appreciated, we respectfully petition the Faculty to recognize the following proposed course of "Quizzes" as a kind of instruction of which students may avail themselves with advantage.

We propose the following distribution of subjects:—

Anatomy and Surgery, Dr. C. B. Porter;

Physiology and Chemistry, Dr. J. S. Lombard; Theory, Practice and Pathology, Dr. C. W. Swan; Obstetrics and Materia Medica, Dr. A. D. Sinclair.

Our plan is to have one recitation a week by each of us. Prof. G. C. Shattuck has kindly offered us the use of the recitation room at his office in case of our receiving the sanction of the Faculty. We further propose to charge each student who may attend our exercises a fee of five (\$5) dollars, in each course, it being optional with the student how many of the courses he attends.

We respectfully submit the above plan for your sanction and approval.

(Signed)

A. D. Sinclair

J. S. Lombard

C. B. Porter

C. W. Swan

The plan did not meet the approval of the Faculty and a vote was passed that no member of the Faculty should engage in outside teaching. The past history of the several medical schools of Boston, rivals of the Harvard School, probably led the Faculty to discourage all attempts to build up clinics and create opportunities for medical instruction not entirely controlled by itself.

The list of names with the courses offered will convince any one of the present day that the attempt to curtail the useful energies of these young men was a mistake. Nothing but good to the Medical School could have resulted from these attempts to supplement the facilities, then necessarily inadequate in many ways, offered by the Medical School. There was no conflict of hours, and co-operation was intended, not competition.

I do not know how long these courses were given, perhaps some of them never really began. Dr. H. K. Oliver, the last survivor of the list, told me in 1919 that he had several students in laryngology but no patients, because at that time, 1867-69, only a few years after the discovery of the laryngoscope by Manuel Garcia, there was no knowledge on the part of the doctors or the laity of the possibility of local examination and treatment of diseases of the larynx. Dr. Oliver had to be doctor and patient at the same time. Fortunately for him in this dual role, he had a capacious and tolerant throat, and as he came of a musical family, he had and could impart an enthusiasm which was much needed in his embryo clinic. Using sunlight as an illuminant, he demonstrated his own larynx to the students, rather an unpleasant method of instruction and one accompanied with great limitations because he was able to show only normal conditions. The advertised hour of his exercise, 7.30 p. m., must have been changed, if he made use of daylight.

In 1869 Dr. Shattuck resigned as Dean of the

Medical School. He had been an advocate of the benefits to be derived from "quiz" classes among students outside the regular lectures and had provided rooms in his own office building for that purpose, but he was not supported by the Medical School. Whether this was the cause of his resignation I do not know, but it may well have been a factor in causing him to make the decision. He was succeeded by Dr. Calvin Ellis.

Dr. Shattuck continued to carry on his own dispensary work for medical diseases of women at No. 18 Stanford St. The front room was used as a waiting room and leading out of it toward the rear was his consulting room, looking on the garden and the West Church. Compressed tablets and pills were being introduced to the profession at about this time and used as a convenient form of dispensing; in a closet leading out of the consulting room Dr. Shattuck had a large stock of these remedies, which he gave to such patients as were seemingly unable to pay for them. Prescriptions were generally filled at the nearby apothecary shop of Emory Souther, corner of Green and Lyman Sts., at the foot of Stanford St.

In October, 1873, this Dispensary took on an increased activity with the advent of Dr. J. R. Chadwick and Dr. C. P. Putnam, graduates of the class of 1865 of Harvard College. The former, recently returned from Europe, where he had prepared himself to practice gynecology as a specialty, opened a Free Dispensary for Diseases of Women at 241 Harrison Ave., corner of Pine St., in connection with the Dispensary for Diseases of the Skin, which Dr. Edward Wigglesworth had founded in Jan., 1872, and which he sustained for five years, until the Dept. for Diseases of the Skin was opened at the Boston City Hospital.

In the BOSTON MEDICAL AND SURGICAL JOURNAL for Oct. 30, 1873, appeared the following unsigned editorial, written by Dr. Arthur H. Nichols, a friend of Dr. Chadwick, who claims to have been instrumental in inducing Dr. Chadwick to study medicine:

Rapid increase in the population of Boston caused by the development of its commercial resources as well as by the systematic process of annexing the adjacent towns, must soon render the existing hospital accommodations of the metropolis quite inadequate. The waiting rooms and wards of different hospitals and dispensaries are in fact already overcrowded and further provision for patients is absolutely necessary.

The medical profession as well as the public are to be congratulated upon the establishment of a new dispensary under charge of Dr. J. R. Chadwick, to be devoted exclusively to treatment of diseases peculiar to women. It is hardly necessary to allude to the important advantage that must accrue to medical students from the opportunity that will be afforded them

of making themselves familiar with this class of diseases. Young practitioners, likewise, who may not have the privilege of pursuing their studies where clinics for the observation of these diseases are already established will here have the chance to remove a serious educational defect.

The following circular, written by Dr. Wigglesworth, dated Boston, Nov. 8, 1873, was sent out to the profession of Boston and vicinity:

Your attention is called to the removal of the Dispensary for Diseases of Women from Harrison Ave. to No. 18 Stanford St., where it will henceforth be open Monday, Wednesday and Friday at 10 a. m. James R. Chadwick, M. D.

Dr. Chadwick was Instructor in Diseases of Women in the Harvard Medical School 1873-75 and Lecturer in Gynecology 1875-79. From 1879-87 he was Clinical Instructor in Diseases of Women, giving instruction at the Stanford St. Dispensary to the Fourth Year Students who took gynecology as an elective.

The patients were used for practical exercises in diagnosis and treatment and the students, not more than two at a time in attendance at the clinic, were allowed what at that time were considered unusually valuable opportunities to make digital examinations, not unlike the "touch" courses of Vienna. There was no nurse or assistant, the janitor looking after the patients and taking care of the whole building.

The rooms were used much as in Dr. Shattuck's time, the front one as a waiting room and the one looking out on to the garden and the West Church as the consulting room, in the centre of which was the examining table, invented by Dr. Chadwick at about this time. The students stood between the table and the windows.

The clinic was popular, over 1000 patients having been treated up to 1877, a daily average of about 15. Sometimes there were 20 or 30 a day, a hard morning's work for a physician without assistants. The patients seemed to have a way of finding out on which days there were to be no students, (or "young doctors") and managed to come on those days, so that great diplomacy (?) was often necessary to induce them to come when they could be used for clinical instruction.

In the spring of 1877, when I was a 3d year student in the Harvard Medical School, I took a course of four weeks in gynecology with Dr. Chadwick, and after my return from Europe he asked me in 1881 to act as his assistant at the clinic. In this capacity I helped him with the patients and students and substituted for him when he was away. Naturally enough, many of the women would have nothing to do with me at first, preferring to wait for the "head doctor."

Not long after this, I started a clinic of my own, taking Tuesday, Thursday and Saturday

mornings at 10 o'clock, these days having been given up by Dr. C. P. Putnam, who changed to afternoon hours.

I gradually found more and more patients awaiting my arrival, and as Dr. Chadwick was getting a larger private practice with more consultations and operations and consequently had to rely more on me to look after the clinic, my clientèle grew larger and I became known as the "head" doctor. In about 1887 he gradually gave up coming to the Dispensary and I took his days in place of my own.

In the summer of 1880 the Summer School for Clinical Instruction was started by some of the younger Boston doctors, graduates of the Harvard Medical School, many of whom had recently returned from Europe and wished to use their clinics for giving special courses similar to those they had attended at the Poliklinik in Vienna. The following year, 1881, these courses were regularly organized, and in the winter of 1885-86 the name was changed to the Boston Polyclinic and for the first time courses were given in the winter. They may be looked on as the successors of the Recitations announced to be held on Stanford St. in 1867-68.

In 1881 I gave my first course in gynecology in connection with the Summer School for Clinical Instruction at this Dispensary and continued until 1889, having classes of two students at a time as they applied to the Dean of the Polyclinic. They were generally practitioners of medicine who had had no instruction in gynecology in their student days, and saw the importance of a "working" knowledge of the diagnosis and treatment of diseases of women in order to increase their ability to extend their family practice.

In 1889 I severed my connection with the Dispensary, having ceased to offer courses in the Polyclinic several months before.

Dr. Charles P. Putnam organized and opened on Nov. 18, 1873, a clinic for Diseases of Children at the Stanford St. Dispensary on Tuesday, Thursday and Saturday mornings at ten o'clock, alternating with Dr. Chadwick. He was Lecturer on Diseases of Children in the Harvard Medical School 1873-75 and Instructor in Pediatrics 1875-79.

A few students attended his courses, which were electives, but Pediatrics was then in a stage not fully differentiated from Clinical Medicine, in the public mind, and questions of feeding, diet, attention to teeth, tonsils and adenoids were not understood as they are today. Dr. Putnam was much interested in deformities of children, bow-legs, club-feet, curvature of the spine, and took great pains to apply the proper apparatus, often of his own devising or modification. This was pioneer work, before the instrument- and apparatus-makers had much to offer other than a limited number of the standard appliances. He gave instruction in vaccination, and on Saturday mornings he had

a number of children ready for demonstration of the methods of vaccinating and the later appearances of the vaccinated arms and legs. My first knowledge of the subject came from a course which I took with him in 1877. One of the questions on the examination paper on Theory and Practice of the Medical School in 1874 was: "Vaccination; history and rules," very likely suggested by Dr. Putnam.

After a few years he ceased to give instruction, although he kept on with his clinic until 1890 or later. After my withdrawal he turned over the gynecological cases to Dr. George Haven, M. D., Harv. 1883, who took the days that had formerly been mine. On Dr. Putnam's retirement, Dr. Edward Reynolds, M.D., Harv. 1885, took alternate mornings with Dr. Haven, the two clinics being almost entirely gynecological, but not used for teaching.

Dr. Haven withdrew in 1891 and his clinic was taken over by Dr. George A. Craigin, M.D., Harv. 1890, who kept on for two years as colleague of Dr. Reynolds. A number of children appeared as patients from time to time and these were turned over to Dr. Craigin. According to him, the size of his clinic varied from five to twenty or more a day and he found it quite unlike that of the ordinary hospital clinic, in that the patients came from out of town as a rule and represented the better class of women in moderate circumstances, who came because there was something the matter with them and were willing to carry out the doctor's instructions. The work was more like private office practice than that of a dispensary.

Having no assistant, Dr. Craigin took the histories, made the diagnoses and followed up each case in all its details, which meant a good

deal of work but proved very instructive in the long run. The clinic was not used for purposes of instruction to students by him.

Dr. Craigin was followed in 1893 by Dr. Eugene M. Holden, M.D., Harv. 1890, who took Dr. Reynolds' days also, as the latter resigned at this time to join the staff of the Boston City Hospital. Dr. Holden continued his daily service for four years until 1897. He writes me that he conducted the clinic along the old lines, with cards and a record book. He generally had a medical student or a young practitioner to help him, never more than one at a time. Some of them were students from Tufts Medical School, who assisted for periods of a month or six weeks.

The patients were nearly all gynecological, very few of them from the city proper, but most of them from the surrounding cities or country, furnishing a great variety of unusual cases. It was a pleasing surprise to him to have the patients come from such long distances, and he thought it spoke much for the early men who had given the institution such a splendid standing. The attendance was large, often as many as 30 or 35 a day, and he considered it the most valuable clinic in the city for experience in diseases of women.

Dr. Holden had no successor and after his departure the Dispensary was vacant as far as doctors and patients were concerned. The building was the property of the Shattuck family and to their agent the rent was paid by the doctors in charge of the clinics. The house is now used as the West End Community House.

On the opposite side of the street, at No. 3, Dr. Leonard Wood had his office in 1885, after his term of service at the Boston City Hospital.

THOMAS SYDENHAM, OUR MODEL PRACTICAL PHYSICIAN*

BY REGINALD FITZ, M. D., BOSTON

(From the Medical Clinic of the Peter Bent Brigham Hospital, Boston, Mass.)

We have assembled this evening to pay tribute to the memory of Thomas Sydenham, a British physician, whose influence upon the development of medical thought still flourishes and whose medical principles are as modern and practical now as they were two hundred and fifty years ago.

Sydenham was born in the latter part of 1624. He came of well-to-do people and spent his early life at a small place called Wynford Eagle, in Dorsetshire. When he was eighteen years old he matriculated at Oxford, perhaps going there as a matter of course because it was the thing for a young gentleman of easy circumstances to do, certainly without any preconceived notion of what he expected to learn

there. He found the Oxford of 1642 much like the Oxford of 1914, a restless place full of young men waiting for war. When war came a few months later, he quickly abandoned his scholastic undertakings like the under-graduate of ten years ago and joined the Parliamentary Army with his friends and family during the First Civil War. He saw active service for three and a half years and "himself faithfully served the Parliament with the loss of much blood."

As he was returning to Oxford, probably in 1647 when he was twenty-three years old, and in as casual frame of mind as any recently demobilized soldier, he says, "I had the good fortune to fall in with the most learned and honorable Dr. Thomas Cox, who was at that time attending my brother during an illness; • • •

*Read before the Boston Medical History Club, December 15, 1924.

He, with his well-known kindness and courtesy, asked me what profession I was preparing to enter, now that I was resuming my interrupted studies, and was come to man's estate. I had at that time no fixed plans, and was not even dreaming of the profession of medicine; but moved by the recommendation and influence of so great a man, and in some way, I suppose, by my own destiny, I applied myself seriously to that pursuit."

Having decided to pursue the knowledge of medicine, he seems to have been a hard and enthusiastic worker. He was created Bachelor of Medicine in 1648 and senior Bursar of All Soul's College in 1649. That he was an adventuresome, patriotic, high-spirited person seems evident from the fact that he left Oxford a second time in 1651 for six months to re-enter the Parliamentary Army during the Second Civil War, and now as Captain of a Troop of Horse. This phase of his military career is most interesting: it is a pity that no one knows the compelling motives which induced him to lead combatant troops instead of doing army work in closer relationship to his professional training. Perhaps it was chance, political influence or public opinion, perhaps the same spirit which has made so many of our own medical men who saw service in 1918 vow that in the event of another war they would re-enter the army with the infantry, artillery or air-force, or in any capacity other than as medical officers. In any event, Captain Sydenham seems to have taken part in several skirmishes and to have proved an efficient and gallant officer.

From the end of the war in 1651 when he again returned to Oxford until 1655 when he married, there is a gap in his history. One can imagine that he spent his time at the University keeping his affections in cold storage according to Oslerian doctrines, and passing his days in study or what nowadays would correspond to research or laboratory work. Finally, when he was thirty-four years old he married Mary Gee and went to London to hang out his shingle. This event naturally serves as a milestone in his life, marking his period of early training from his period of later accomplishment.

The practise of medicine in London when Sydenham began was as difficult for a newcomer as it would be today. Perhaps Gideon Harvey, representing conservative medical opinion of the day, was thinking of the recent scientifically trained university graduates such as Sydenham when he wrote: "They flay Dogs and Cats; take livers, lungs, calves-brains, or other entrails, dry, roast, parboil them, steep them in vinegar, etc., and afterwards gaze on little particles of them through a microscope:—then obtrude to the world in print whatever false appearances gleamed into their eyes; and

all this to no other end, than to beget a belief in people that they, who have so profoundly dived into the bottomless pores of the parts, must undoubtedly be skilled in curing their distempers." There were honest doctors and dishonest doctors, poor doctors and doctors whose idea of their profession was to use their medical knowledge as a means to make money and who were very unscrupulous in their ways of doing it. There were surgeons who were not allowed to prescribe for internal maladies but who nevertheless did so. There were crowds of herbalists, water-casters, wise-women and quacks of all sorts who made orthodox practise even more difficult. In brief, to do Sydenham justice, we must remember as Dr. John Brown said, "In the midst of what a mass of errors and prejudices, of theories actively mischievous, he was placed, at a time when the mania for hypothesis was at its height, and when the practical part of his art was overrun and stultified by vile and silly nostrums."

It is not probable that Sydenham at first was very successful. One likes to think that he shortly realized the importance of wider clinical knowledge to a man of his training and ideals in such a medical environment and that he therefore determined to take a post-graduate course in clinical medicine. Whether this supposition is true or not he apparently went abroad to work under Barbeyrac at Montpellier for two or three years, returning to London in about 1661. The time spent in France completed the education which helped to make him one of the most distinguished internists of his day and to build up his practise and fame by leaps and bounds. Of his subsequent life there is little to say. He was admitted as a Licentiate of the College of Physicians in 1663. He received the degree of Doctor from Cambridge University in 1676. He died on December 29th, 1689, at the age of sixty-five years.

So much for the bare outline of Sydenham's history and career. It is remarkable that a man born three hundred years ago should have had a medical education so in keeping with present day tendencies. With a little imagination one sees in Sydenham the prototype of many of our medical leaders of today: A forceful intelligent character gifted with inherent qualities of leadership perhaps enhanced by military discipline, able to combine a period of the scientific study of medicine in a laboratory with one of practical study in a well organized teaching clinic, finally entering the practise of medicine after a long period of apprenticeship, and becoming a dominating influence on medical thought by virtue of his own personality and knowledge, plus the breadth of medical vision developed through such a course of training.

Why has Sydenham's name been passed along from generation to generation of medical men as one of our greatest leaders? Syden-

ham laid down two fundamental propositions which have stood the test of time: all diseases should be described as objects of natural history and all treatment should consist in an effort to permit Nature to do her own work. These are his great contributions to medicine and the reasons why his name will always be remembered.

Sydenham said, "In writing therefore, such a natural history of diseases, every merely philosophical hypothesis should be set aside, and the manifest and natural phenomena, however minute, should be noted with the utmost exactness. The usefulness of this procedure cannot be easily overrated, as compared with the subtle inquiries and trifling notions of modern writers, for can there be a shorter, or indeed any other way of coming at the morbid causes, or discovering the curative indications than by a certain perception of the peculiar symptoms?"

"Our art is not to be better learned than by its exercise and use,—it is likely in every case to prove true, that those who have directed their eyes and their mind, the most accurately and diligently, to the natural phenomena of diseases, will excel in eliciting and applying the true indications of cure."

"Whenever I find that, from the medicine which I have thought fit to use, I am unable to give the patient reason to expect any definite benefit, I do no more than my duty as an honest and conscientious physician, when I just do nothing at all—simply visiting the patient from day to day, to see that he is no worse today than he was yesterday, nor yet likely to become worse by tomorrow. Hence every day does one of two things,—it either adds to the safety of the patient, or else gives the physician an opportunity of discovering what means he has more certain of destroying the disease than his previous ones."

These are typical examples of Sydenham's practical common-sense teachings. For such, Locke, his friend and contemporary, called him "a master builder in the commonwealth of learning", Rush, a hundred years later, "the physician of all ages and centuries," and Sir William Osler, in our own time, "the model British physician in whom was concentrated all those practical instincts upon which we lay such stress in the Anglo-Saxon character." We do well to commemorate the three hundredth anniversary of his birth. He rests with those other immortal, history-making soldiers for whom John McCrae wrote:

"To you from falling hands we throw
The torch. Be yours to hold it high!"

Anyone interested in Sydenham should read Dr. John Brown's essay on "Locke and Sydenham" appearing in *Horae Subsecivae*. In order to sense Sir William Osler's personal admiration for Sydenham, one should read "Brit-

ish Medicine in Greater Britain" published in *Aequanimitas*. Payne's "Thomas Sydenham" and Comrie's "Selected Works of Sydenham" give longer but well written and very readable histories. Latham's "The Works of Thomas Sydenham, M.D." published in 1848 is also an interesting book, though Dr. Brown's criticism of Latham's "Life" is worth paying attention to. " * * * and the Life, which might have contained so much that is new, valuable, and entertaining, is treated with a curious infelicity and clumsiness, that is altogether one of the oddest, most gauche and limping bits of composition we ever remember having met with." Another charming book is Benjamin Rush's "Works of Thomas Sydenham, M.D." published in Philadelphia in 1809. Katherine and Cecil Drinker introduced me to this book ten years ago. If I never thanked them properly before, I make haste to do so now. Sydenham's "Methodus Curandi Febres, propriis observationibus superstructa" was published in 1666. The "Tractus de Podagra et Hydrope" was published in 1683 and, as Dr. Brown remarks, records Sydenham's own sufferings from the gout in a clever and entertaining way. Sydenham's last large work, the "Processus Integri in morbis fere omnibus curandis" was published in 1692, three years after his death. For his other publications I refer my readers to the bibliography recently compiled by Comrie.

BOOK REVIEWS

Fundamental Principles in Treatment. By HARRY CAMPBELL, M.D., B.S., F.R.C.P. Lond. New York: William Wood & Co. 1924.

This book aims to present a rationale of general therapeutics from the philosophic standpoint of the physician who is also a psychologist. It is largely an amplification of the author's previous volume on treatment, in which he "endeavored to enunciate fundamental principles likely to be helpful to the physician in the treatment of disease." Six of the fifty chapters are devoted to psychotherapy. One of the best is the last chapter on "some important therapeutic truths," a series of wise maxims and observations. Though neither systematic nor universal, the book is full of common sense, evidently embodying the life-work, methods and philosophy of a level-headed, successful Scots physician.

General and Special Surgical Diagnosis. By PROFESSOR MAX KAPPS, Hannover. Berlin and Vienna: Urban & Schwarzenberg. 1924.

This comprehensive text-book of general and special surgical diagnosis for students and practitioners is a typical monument of German industry and scholarlyness. It consists of 652 pages, finely printed in Austria on thin but excellent paper, and is illustrated by 601 admirable text cuts, many in several colors, and by five colored tables. Such special topics as the eye, the ear, the female reproductive organs are not considered; but there is a chapter on intracranial hemorrhage of the newborn, which gives to Seitz the credit for differentiating clinically the supratentorial and infratentorial types. The author's motto is well chosen: that "the good surgeon is known not by what and how he operates, but by the operations which he does not do."

Case Records
of the
Massachusetts General Hospital

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN
WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY
RICHARD C. CABOT, M.D., AND HUGH CABOT, M.D.
F. M. PAINTER, A.B., ASSISTANT EDITOR

CASE 11041

MEDICAL DEPARTMENT

A circus cook of forty-four was brought to the Emergency Ward June 5. The history was obtained from a fellow employee.

F. H. Not obtained.

P. H. As far as the friend knew the patient had always been well until two months before admission.

Habits. He had taken three or four glasses of whiskey and a few beers daily for at least two years. Venereal disease was questionable.

P. I. For two months he had complained of general weakness, shortness of breath and at times precordial pain. He had been obliged to take to his bed for three or four days at a time on several occasions. His physician said he had "asthma." June 4 he was brought to the Out-Patient Department, but came too late. The morning of admission on attempting to get out of the carriage in which he came to the hospital he collapsed and quickly became unconscious.

P. E. A fat, red-faced man, unconscious, with Cheyne-Stokes respiration. During the short periods of apnea he was absolutely motionless. Then began noisy labored breathing using the alae nasi and muscles of neck and thorax. During this time he threw the left leg and arm about and moved his head from side to side, wrinkling his forehead. There was slight paralysis of the right side of the face. The tongue seemed to hang to the right side, though not protruding. Right arm and leg motionless and rather limp. Lips cyanotic. Right hand and foot cold. Throat not examined. Apex impulse of the heart not seen or felt. No enlargement to percussion. Action regular. Sounds of fair quality. A_2 not accentuated, but slightly greater than P_2 . No murmurs. Pulses of fair volume, slightly decreased tension. Artery walls palpable and a little thickened. Systolic B. P. 145. *Lungs.* A few medium and coarse râles throughout. *Abdomen* held rather rigid. Tympanitic throughout. Liver dullness from the sixth rib

to two inches below the costal margin. Edge not felt. *Genitals* normal. *Pupils* equal, regular, no reactions to light, some nystagmus. *Reflexes.* Knee-jerks exaggerated, right slightly greater than left. Babinski on right. T. 100.5°-101.6°. P. 100-115. R. 40. *Urine* and *blood* not recorded.

The patient's breath did not smell alcoholic. His head showed no evidence of contusions or fracture. On catheterization about eight ounces of urine was obtained which showed no albumin, sugar or casts.

In the ward the patient was so restless and his breathing and groaning were so noisy that he was changed to another ward. His condition became steadily worse. The cyanosis deepened. In the afternoon examination of the back showed marked dullness from the mid-scapula down on both sides. The lungs were so filled with coarse moist râles that the character of the breathing could not be determined. Early the morning of June 6 he died.

DISCUSSION

BY DR. RICHARD C. CABOT

NOTES ON THE HISTORY

With so imperfect a history the chances of correct diagnosis are of course much less than the average.

The history of the present illness suggests cardiac disease or possibly nephritis.

NOTES ON THE PHYSICAL EXAMINATION

Physical examination shows some evidence but no clear proof of a right hemiplegia. There is no good evidence of passive congestion.

The rest of the physical examination and the subsequent notes do little to clear up the case. Lumbar puncture might have helped us by the demonstration either of blood due to cerebral hemorrhage or of the signs of meningitis.

DIFFERENTIAL DIAGNOSIS

My total impression on looking over the whole case is that the patient had arteriosclerosis which probably affected both his heart and his brain, and that in the end there was either a cerebral hemorrhage or some other vascular lesion injuring the brain.

There may have been a terminal pneumonia, but I do not believe it was the cause of death.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Cerebral hemorrhage? or embolism?

DR. RICHARD C. CABOT'S DIAGNOSIS

Arteriosclerosis, cerebral and cardiovascular. Cerebral hemorrhage or other vascular lesion of the brain.

ANATOMICAL DIAGNOSIS

1. *Primary fatal lesions*

Chronic, acute and subacute interstitial myocarditis.
Parietal thrombosis of the left ventricle.
Embolism of the middle cerebral artery, left.
Infarction of the basal ganglia, left caudate nucleus.

2. *Secondary or terminal lesions*

Sclerosis of the coronary artery.
Hypertrophy and dilatation of the heart.
Multiple subcutaneous hemorrhages of the heart, abdomen, and flanks.
Hydrothorax.
Chronic passive congestion of the lungs, spleen, liver.
Edema of the lungs.

3. *Historical landmarks*

Chronic adhesive pleuritis.
Cyst of the right kidney.
Adherent dura.

DR. RICHARDSON: Head. The sinuses and middle ears were negative.

Vessels of Willis: The left middle cerebral artery was occluded by a frank embolus. The vessels elsewhere showed in places fibrous sclerosis. In the left caudate nucleus there was an area of infarction. The right basal ganglia were negative. The tissue of the left hemisphere was lax and wet and that of the right firm. The brain tissue elsewhere was negative. The ventricles were negative. The brain weighed 1315 grams.

The skin of the arms and the flanks was mottled with small hemorrhagic areas. There was abundant subcutaneous and retroperitoneal fat.

The left pleural cavity contained 250 c.c. and the right 850 c.c. of straw colored fluid. There were old pleural adhesions on the right. There was edema of the lungs.

The heart weighed 440 grams, slightly enlarged. The myocardium generally was flabby, but the wall of the left ventricle, lower two-thirds, along the descending branch of the coronary artery was thin, uneven, and showed depressed gelatinous areas and grayish-white areas with intermingling areas of muscle tissue. In the left ventricle opposite this there was a mural thrombus. The right ventricle and the valves were negative. The descending branch of the left coronary at a point $1\frac{1}{2}$ cm. from its origin was considerably narrowed along a length of about 1 cm. and the walls calcified and rigid. Below this there was a similar change, but not so marked. There was some fibrocalcereous sclerosis of the right coronary. The aorta showed only a slight amount of fibrous sclerosis.

The lungs, spleen and liver showed some chronic passive congestion. The kidneys were

negative except for a smooth walled cyst in the right kidney.

NOTE BY DR. CABOT

The cardiac portion of the post-mortem findings could not, so far as I see, have been predicted during life.

CASE 11042

CHILDREN'S MEDICAL DEPARTMENT

A boy three and a quarter years old entered December 1 with a diagnosis of possible hemophilia.

F. H. His father had an arrested case of pulmonary tuberculosis. A great grandfather also had tuberculosis. A maternal aunt when seventeen years old had intervals of severe uterine bleeding. In later years this improved. One other baby of nineteen months was in good health.

P. H. He was born three weeks before full term with normal spontaneous delivery, and weighed $7\frac{3}{4}$ pounds at birth. He was breast fed for a month, but did not gain, and was therefore put on a formula, $\frac{1}{3}$ milk, $\frac{2}{3}$ water and 2 drams of dextrimaltose. On this he gained weight and did well except for colic. He cut teeth at eight and a half months and walked at fourteen months. For the first four to six months he looked pale and frail, but gradually gained normal color, and after the age of one year looked the picture of health. At seven months he had a high fever, 104.5° , and swollen glands of the neck. This cleared up in the course of three days. At seventeen months he had a similar attack of fever and swollen glands of the neck, clearing up in three days. In the interim he was well except for occasional colds in the head. At two and a half years he had a high fever, 103.3° , with photophobia and reddened throat. At three years and one month he had a fourth attack of fever and swollen glands with recovery in three days. November 26 he had fever of 104° for one day.

P. I. (In part from the attending physician.) At nine days the baby was circumcised. After it he bled for four days. Whenever injured he had big bruises. At twenty months he fell against a door and cut his lip, bleeding for twenty hours. Finally this was stopped by the application of thromboplastin with local pressure for an hour and injections of fibrogen. At twenty-six months he bit his tongue. Bleeding continued for six days during which he was treated locally with adrenalin and internally with calcium lactate. Bleeding ceased when the wound was cauterized with electric wire and thromboplastin injected. At two years and seven months he again bit his tongue and bled for twenty-four hours. He was

cauterized. Bleeding recurred that night and the cautery was repeated, with thromboplastin injections. At the end of ten days the scab came off with further bleeding until cauterized locally and treated with Parke Davis serum (hemoplastin?). The bleeding was checked for four days, then recurred for a few hours, was checked with cautery and hemoplastin and ceased until the following day, when it bled for two hours and then stopped spontaneously. At two years and ten months he injured his cheek and bled into the mouth for three days. There was swelling of the right eye, cheek and under the chin. This cleared up after an injection of horse serum. At three years he fell and bumped his right hand. There was a large tumor but no free blood. A week later he injured the left knee. There was marked swelling and painfulness. He was not able to walk. This cleared up in a week.

P. E. Well nourished. Tonsils hypertrophied and reddened. Not a marked mouth breather. Chest slightly pigeon shaped. *Lungs, abdomen and genitals* negative. *Heart*. Normal size. Sounds of good quality. A soft systolic murmur heard at the apex. *Pupils* normal. *Reflexes* equal and active. *Extremities*. Several bluish lesions over the extremities, the thorax, and the lumbar region.

T. 98.7°-99.8°. P. 108-128. R. 25-30. *Urine* negative. *Blood*. Hgb. not recorded, leucocytes 8,000, polynuclears 62%, reds 4,260,000, apparently normal. *Wassermann* negative. *Bleeding time* December 3, 3 minutes. *Clotting time*. Not clotted in two hours. *Blood group* IV.

The patient's mother was told to forbid the boy to play strenuous games which might subject him to injury. She was advised to give him a diet rich in meats and to see that he had plenty of outdoor exercise. Her blood was found to be in group IV like his own. She was told to take him immediately to a hospital for transfusion in case of injury and bleeding.

DISCUSSION

BY DR. FRITZ B. TALBOT

The history of this child is typical of hemophilia except in the lack of a definite family history of this condition. There is usually a history of bleeding in male relatives. It was recognized early in the last century as a hereditary disease limited to the males and transmitted by the females, but not occurring in the females. It is thought to be largely confined to the Teutonic race. On the other hand it has been recognized in the Arabs. There is also evidence that it was known by the ancient Jews, because the Talmud contains dispensations with regard to circumcision in certain circumstances in which children of female relatives have died after circumcision.

The earliest hemorrhage in this child was at

nine days of age, after circumcision. There is a subsequent history of frequent hemorrhages following smaller bruises and trauma. There was nothing uncertain as to diagnosis, however, to warrant sending him in to the hospital for a more complete investigation. The physical examination was normal, as it is in other children with hemophilia. The blood count and morphology were also normal. The Wassermann reaction was negative. A positive finding of a normal bleeding time and a markedly prolonged clotting time made the diagnosis clear. It was evidently a characteristic case, with a history also of joint symptoms. The diagnosis of a typical case of hemophilia as a rule presents no difficulties.

The most striking feature is the persistent, recurring bleeding in very early infancy, especially after trauma. This condition should be sharply differentiated from hemorrhagic disease of the new-born and from purpura hemorrhagica. Hemorrhagic disease of the new-born may be confused with hemophilia. In this case after the first bleeding at nine days there was no evidence on which a definite diagnosis could rest, especially since there was no abnormal bleeding in other males of the family. However, at the age of nine days if this had been hemorrhagic disease of the new-born one might have expected bleeding from some of the mucous membranes also, or from the umbilicus.

Purpura hemorrhagica may be contrasted with hemophilia. Although large hematomata may form under the skin in hemophilia as a result of bruises, purpuric spots do not occur. In hemophilia the blood platelets are normal or sometimes increased, while in purpura hemorrhagica they are much decreased. In hemophilia the clotting time and the prothrombin time are much prolonged, while in purpura hemorrhagica they are usually normal. The blood clot in hemophilia is formed and retracts normally, while in purpura hemorrhagica it does not retract. The bleeding time of the former is normal and of the latter prolonged.

It should be borne in mind that hemophiliacs as a rule do not bleed from pin pricks. It apparently requires traumatism for severe hemorrhage. This is fortunate, because it enables the physician to take blood from a patient without danger. The ear or vein may be punctured with immunity and the necessary blood for examination obtained. Trauma of the mucous membrane often is followed by severe hemorrhage. In this case there was one instance in which trauma of a joint resulted in hemorrhage and temporary disability. This is quite common in hemophilia and sometimes leads to its being confused with tuberculosis. It differs clinically in that the onset is very sudden in hemophilia and very slow in tuberculosis. In the former there is apt to be considerable pain, whereas in tuberculosis usually one joint only is involved. In hemophilia re-

peated hemorrhages are apt to involve even several joints. Those most particularly involved are the knees and elbows. If repeated hemorrhages come in the same joints deformity may result.

The course of the disease usually tends to be fatal, because the child is exposed to traumata which the adult can usually avoid. If these patients attain adult life they are apt to have disabling joint deformities. On the other hand hemorrhages although repeated tend to become less severe.

The treatment of course is to check the hemorrhage when it occurs. There is very little that can be done to prevent hemorrhage, and the mother should be instructed to guard against bruises. It is thought that a diet containing a large amount of meat may make blood clot more easily. Consequently it is now the practice to give these children a diet rich in protein. Cephaline has also been given by mouth over a long period of time for the same reason. It is useful when applied to fresh bleeding. If a wound is bleeding it should be packed with sterile gauze and gentle pressure applied. When possible the bleeding point should be sutured. Since the bleeding is due to a lack of some substance which is necessary for the clotting of the blood attempts are made to supply this deficit at the bleeding point. Fresh meat is often applied, also fresh blood serum. If there is any considerable loss of blood, however, a transfusion is necessary. In some instances citrated blood with plenty of platelets in it seems to be effectual.

This child's bleeding time was determined so that the mother could be prepared to supply a donor of the same grouping if an emergency arose.

DIAGNOSIS

Hemophilia.

CASE 11043

SURGICAL DEPARTMENT

First entry. A Nova Scotian teacher of twenty-two entered January 26.

F. H. Good.

P. H. Good. She had the usual diseases of childhood, and "worm fits." At five, six and seven years she had pneumonia. As long as she could remember she had had "bilious attacks" every four or five months lasting four or five days—headache, nausea, vomiting, usually yellowish vomitus, and usually jaundice. The last attack, two years before admission, lasted two weeks and was accompanied by dull pain in her right side and fever. For two years she had had leucorrhea. For the past two months her catamenia had been much shorter and less painful than usual.

P. I. Fourteen months before admission she noticed pruritus of the vulva and increasing frequency of micturition. The pruritus gave way to a burning sensation. Two months after the onset she began to have pain in the bladder region, usually during the first part of the night, waking her from sleep, lasting about half an hour and relieved by voiding. She was treated by a physician for cystitis. A month and a half before admission she was ill in bed four days with fever, headache, vomiting, increased pain in the bladder, and nycturia 10-12. On the third day she noticed bloody urine. Six days after the onset she returned to her teaching. After two days she again gave up work. The hematuria continued, the blood often being in clots. Movements of the bowels caused pain in the bladder region. Three weeks before admission she went to a doctor's house where she remained two weeks for observation. During this time she ran a temperature of 99° to 102°, usually 99° in the morning. During the past few weeks she had had pain in the lumbar region on both sides. The hematuria had continued. She had lost twenty pounds in the past two months.

P. E. Well nourished. Mucous membranes slightly pale. Throat slightly red. Apex impulse of the heart not seen or felt. No enlargement to percussion. Diastole slightly shortened. No murmurs. Pulses normal. Lungs. Slight dullness at the right apex behind, somewhat longer and louder than normal. Whisper and voice both increased. In the lower axilla and laterally on the lower front chest were three or four small constant tender spots localized over the ribs. No deformity of the ribs, but the subcutaneous tissues felt lumpy. Abdomen. Slight tenderness in the right flank, some in the left flank. Costovertebral tenderness on both sides. Extremities, pupils and reflexes normal.

Findings before operation. T. 102.4°-99°, P. 62-110, R. normal. Urine. $\bar{3}$ 25-61, sp. gr. 1.008-1.010, pink and turbid at one of four examinations, a slight trace to a very slight trace of albumin at all; at two, one of them a catheter specimen, an inch to an inch and a half of sediment in the tube, practically only pus, guaiac negative, at a third and fourth test occasional red blood corpuscles. Renal function 70%. Two urine cultures showed streptococcus. Smear from the catheter specimen showed rod bacilli (colon?). No tubercle bacilli. Blood. Hgb. 75%, leucocytes 12,400-5,200, polynuclears 86%, slight achromia and anisocytosis. Wassermann negative. X-ray January 28. Left kidney somewhat enlarged. No evidence of stone. Shadows seen in course of right ureter near fourth lumbar vertebra did not look like stone. Lower portion of ureter negative. X-ray of the chest showed enlargement of the right side of the heart, otherwise negative. X-ray of skull negative. Cystoscopy January 29. A much contracted irritable

bladder which did not suggest tuberculosis. Left ureteral orifice looked normal, but the catheter caught low down. Right ureter not seen. "I think the right kidney feels very much enlarged and soft like a pyonephrosis. Condition is probably a right pyonephrosis with sound left kidney. I believe that nephrectomy will be necessary." A guinea pig was inoculated with urinary sediment. Cystoscopy under ether February 7. Bladder generally normal. Slight diffuse cystitis. Right ureteral orifice slightly puffy. No ulceration or retraction. Both ureters catheterized. Clear urine and normal function from the left. Thick pus with much depressed function from the right. Urine from the right kidney showed much pus, chains of streptococci, and occasional red blood corpuscles. The left kidney showed a few leucocytes and rare red blood corpuscles. Culture from the right kidney showed streptococci, from the left kidney no growth.

February 10 operation was done. The patient made a good recovery and convalescence, with some trouble from an acute left otitis media which required incision of the membrane. February 27 she was discharged feeling very well.

History of interval. After her operation much of the hematuria stopped, but the frequency and nycturia persisted. In the course of the year the sinus in the wound healed. She rested for two years, worked half days for two years, then worked steadily, although she continued to have frequency, burning nycturia and hematuria. At this time, six years before readmission, she had a series of gastro-intestinal X-rays with a diagnosis of possible peptic ulcer, possible adhesions. The autumn before readmission the hematuria stopped and the other urinary symptoms gradually disappeared. During the winter the urinary stream gradually became smaller and voiding became increasingly difficult. She began to have nausea and vomiting from a quarter of an hour to an hour after eating. The vomitus was much mucus, never blood, often the meal she had eaten the preceding day. Since the first of June she had had frequent headaches and dizziness, a constant bad taste in the mouth, and drowsiness. At readmission she had generalized pains all over the body and could retain only warm liquids. She had lost twenty-two pounds in six months.

Second entry, August 21, ten years after her discharge. The chief complaints were vomiting and difficulty in urination.

P. E. Well nourished. Head, throat, heart and lungs negative. B. P. 118/70. Abdomen. Striae on skin over both hips. Iliac crests rather unusual in shape. Definite tenderness on the left side on deep palpation. Tenderness in both costovertebral spaces. Left kidney not palpated. No masses. Extremities. Shins

tender to palpation. *Genitals, pupils and reflexes* normal.

Before the second cystoscopy T. 97°-100°, P. 80-102. After the second cystoscopy T. 98.4°-102° and P. 88-136, with a terminal rise to T. 106°. P. 172. R. not remarkable except for a rise to 30 on September 3 and a terminal rise of 30-40. Urine cloudy, alkaline, sp. gr. 1.010, a large trace of albumin at both of two examinations, 10-15 leucocytes August 24, sediment negative September 7 (catheter specimen). Blood not recorded. Wassermann negative. Renal function. In two hours a trace.

The day after admission a soft rubber catheter was inserted. The patient felt nauseated after each meal and frequently vomited. Gastro-intestinal X-rays were planned, but were postponed because of a non-protein nitrogen test of 91 mgm. August 25 cystoscopy was done. Injection of methylin blue did not come through the ureter in fifteen minutes. The patient voided frequently and in small amounts. The day after cystoscopy she was catheterized without difficulty with a soft rubber catheter. The residual was six ounces. The bladder was washed with boric acid. That night she vomited, and the following morning vomited everything eaten. The fluid intake was 560, the output 525. August 28 a second cystoscopy was done. A number 6 catheter stuck about four inches up the left ureter. When an attempt was made to push it further the patient complained of sudden severe pain in the left kidney and vomited. She had attacks of severe pain with vomiting that afternoon, quieting down in the evening. There was spasm in the left costovertebral region and over the bladder. The abdomen was not rigid and there was no elevation of temperature or leucocyte count. She continued to have much abdominal pain next day. She was again put on constant drainage. The urinary output was very low. She vomited constantly. The non-protein nitrogen was 135 mgm. September 5 edema was becoming very marked and she was troubled with an itching papular rash over the whole body. A skin consultant made a diagnosis of probable dermatitis medicamentosa. The non-protein nitrogen was 86 mgm.

September 10 she complained of sore throat. A throat consultant reported, "Mucopurulent posterior nasal discharge, also in nostrils. Slight congestion of throat. No membrane. Larynx except for some congestion in arytenoid regions negative. Spray* nose and throat." Hot aspirin gargle was used every two hours.

The morning of September 13 the patient's temperature went up to 106°, her pulse to 160. The respirations were 34 and increasingly prolonged and labored. The lungs were clear. She lapsed into coma. The abdomen was extremely tender throughout. That night it be-

*Camphor gr. ii, menthol gr. v, oil of eucalyptus minims v, liquid petrolatum 5 i.

came board-like. The morning of September 14 she died.

DISCUSSION

• DR. HUGH CABOT

The previous history appears to show that she has not been a well person. The three attacks of pneumonia which she is said to have had suggest the possibility that she either had tuberculosis or some lesion of the heart. She has had a great deal of trouble with her digestion, but of a type which does not particularly suggest any lesion of the digestive tract. Her present illness at her first admission focuses very clearly upon the urinary tract. It is interesting to note that her bladder irritation resulted in her being treated for "cystitis," though of course such a disease is practically non-existent. It is quite clear that at this time she had some infection, probably of the kidney. This suggestion becomes a practical certainty with the occurrence of fever, frequency of urination and vomiting. During the last few weeks it became quite clear that she had some very serious infection of the kidney with ulceration of the bladder. The occurrence of fever would of itself be practically sufficient to exclude any bladder lesion likely to be found in a young woman, and the occurrence of lumbar pain would almost settle the diagnosis.

In spite of the fact that she is said to have lost twenty pounds in weight she still appeared to be in pretty good physical condition.

The examination of the lungs suggests the possibility of some old process at the right apex, but is only suggestive.

It is interesting to compare the two cystoscopic examinations, which were made about a week apart, the first apparently without an anesthetic and the second under ether. The first gave the impression of a very much inflamed bladder, and the amount of information obtained was almost nil. The second one under anesthetic showed much less apparent trouble and enabled them to catheterize both ureters. I think it should be noted that in this case as in so many others the attempt to cystoscope an irritable bladder without an anesthetic proved to be not only a waste of time but to subject the patient to unnecessary and unproductive discomfort. The second cystoscopy makes it quite clear that they were dealing with a very much damaged right kidney which had gone on practically to a pyonephrosis, and an apparently normal left kidney.

I note that the bacteria obtained on the various occasions were always streptococci. This might lead to the conclusion that the kidney infection was due to this organism. This I do not believe to be the case, as I doubt whether a streptococcus could produce this lesion unassisted. The history is that of a long standing urinary infection. There is no evi-

dence that it is secondary to obstruction of the ureter, and there is no evidence of stone. The whole story is so much more like renal tuberculosis with a mixed infection that I incline strongly to that diagnosis. It is not impossible that the shadows referred to along the course of the upper ureter are either calcified tuberculous glands in the chain along the ureter or calcified areas in the wall of the ureter itself. The indication for operation appears to me to be clear. I think that nephrectomy will show a tuberculous kidney.

DR. CABOT'S PRE-OPERATIVE DIAGNOSIS

Right renal tuberculosis with mixed infection.

PRE-OPERATIVE DIAGNOSIS

Right pyonephrosis, non-tuberculous.

OPERATION, FIRST ENTRY

Ether. Oblique kidney incision in right flank. A rather large flabby kidney mottled with white miliary spots was freed without much difficulty. The tissues about it were edematous but not firmly adherent. In freeing the upper pole the true capsule was broken through and stripped off the upper half of the kidney. The ureter was found to be markedly thickened and was apparently tuberculous. It was clamped, cut and cauterized and the stomach tied with chromic catgut. The kidney was delivered, clamps applied to the pedicle and the kidney removed. In ligating the pedicle several of the vessels broke loose, but the loss of blood did not amount to more than six ounces. The hemorrhage was easily stopped and a heavy silk tie placed about the entire pedicle. Continuous catgut was placed behind this, effectually stopping all ooze. Cigarette wick to pedicle.

Post-operative diagnosis, right nephrectomy for tuberculous kidney.

PATHOLOGICAL REPORT.

A kidney with the section surface marked by abscesses with yellow cheesy contents. Microscopical examination showed marked infiltration of the kidney with round cells and numerous scattered foci of round and epithelioid cells and large giant cells.

Tuberculosis.

W. F. WHITNEY.

FURTHER DISCUSSION

Operation confirms the suggestion that the underlying lesion was tuberculous, undoubtedly complicated by a recent mixed infection with streptococcus. Under ordinary conditions the prognosis should be pretty good. About sixty per cent. of the patients with unilateral tuberculosis ultimately make a satisfactory recovery.

The history in the interval before readmission shows that she continued to have a good deal of dyspepsia which might be due to a

lesion of the stomach or duodenum, but is quite as likely to be related to mild grades of renal insufficiency. Evidently the infection of the bladder subsided very slowly, and during the latter part of the time it is quite evident that the scar formation in the bladder was importantly affecting its function. In recent months there is increasing evidence of renal insufficiency as shown by her nausea, vomiting, headaches, dizziness and finally drowsiness. On general principles one would suspect that these symptoms were due to involvement of the remaining kidney, but the disappearance of urinary symptoms is somewhat against this opinion.

At her second admission the general physical examination is not strikingly abnormal. I should lay more stress upon the costovertebral tenderness which is here described if it were not bilateral, since she can have only one kidney to produce tenderness in this neighborhood.

The examination of the urine shows it to be of rather low specific gravity, but as we do not know the quantity on this date it is not easy to draw conclusions. The large trace of albumin in the absence of evidence of inflammation is not easy to explain.

The very low renal function as tested by pthalein makes it clear that there is either grave damage to the kidney or else obstruction to its outlet. This view is further confirmed by the high non-protein nitrogen.

DR. CABOT'S PRE-OPERATIVE DIAGNOSIS

Left renal tuberculosis with stricture of ureter.

PRELIMINARY DIAGNOSIS

Strictured urethra, possible strictured ureter.

CYSTOSCOPY AUGUST 25, THIRD ENTRY

Sacral novol. The self-retaining catheter was removed. The urethra was dilated to No. 25 and the operating cystoscope passed. The bladder was healed throughout except for an area of redness in the position of the left ureteral orifice. Scattered over the bladder were numerous areas of skin tissue evidently from healed ulcers. It was not possible to pass either filiforms or catheters into the left ureter. The bladder urine, which was extremely purulent, when washed clean soon clouded up as though from the discharge of pus from this remaining kidney.

CYSTOSCOPY AUGUST 28, THIRD ENTRY

Spinal novol gave perfect anesthesia. A good view was obtained, showing the left ureter rather reddened and stiffened, but not particularly edematous and lying a little bit to the outer side of its usual position. Various catheters were passed in for three or four inches but no further. There was moderate

flow of extremely cloudy urine. Evidence pointed strongly to a stricture at the point where the catheters stopped. Various areas of ulceration, necrosis and edema above and to the inner side of the left ureter.

Urine from left ureter loaded with pus. No bacteria seen except one group of tubercle bacilli.

FURTHER DISCUSSION

The first cystoscopy showed evidence of very considerable scarring of the bladder which interfered with its function. It is difficult to reconcile the description of the urine as very cloudy with the reports of only a few leucocytes at two examinations. Evidently there must be a considerable variation; I incline to take the more seriously the report which shows much pus. At the second cystoscopy they were more successful in catheterizing the ureter and obtained very cloudy urine. The urine obtained from the left side was very purulent and contained tubercle bacilli. This I think finally settles the diagnosis as one of advanced tuberculosis of the remaining kidney with, as is commonly the case, stricture formation at various points. The occurrence of sudden severe pain suggests a possibility that the catheter was pushed through the wall of the ureter, a very rare accident and one which could hardly occur except in the presence of tuberculosis.

The subsequent history is that of a patient steadily failing from renal insufficiency. There is also a suggestion that there may be urinary infiltration or at least infection outside the ureter at the point of stricture.

I am particularly interested in the report of the itching papular rash which occurred on September 5. I have seen a number of patients with renal insufficiency and retained nitrogenous waste-products who had varying degrees of itching of the skin and sometimes rashes similar to this one, due, I think, to the action of these nitrogenous waste products on the skin, which is attempting to excrete them. I doubt therefore whether this was a case of dermatitis medicamentosa.

The only doubtful question in regard to the cause of death is, I think, the extent to which it is complicated by extravasation of urine if at all. There is evidence of developing infection in the later stages. I think necropsy will show advanced tuberculosis of the left (remaining) kidney with extensive tuberculosis of the ureter and probably a rupture of the ureter with extravasation and infection in the retroperitoneal connective tissues. I am led to wonder whether she will not show evidence of old tuberculosis of the right lung, and I shall be interested to see whether there is any heart lesion which will explain the suggestion of right-sided enlargement. The bladder will of course show the late results of urinary tuberculosis.

REPORT OF NECROPSY OF GUINEA PIG, FIRST ENTRY

A guinea pig inoculated with urinary sediment showed at autopsy five weeks later tuberculous lesions of the glands and spleen.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Tuberculous stricture of urethra.
Tuberculosis of urinary tract.
Uremia.

DR. HUGH CABOT'S DIAGNOSIS

Left renal tuberculosis.
Stricture of ureter.
Retroperitoneal infection?
Old pulmonary tuberculosis?

ANATOMICAL DIAGNOSIS

1. *Primary fatal lesions*

(Tuberculosis of the right kidney.)
Tuberculosis of the left kidney.

2. *Secondary or terminal lesions*

Tuberculosis of the bladder with perforation.
Tuberculous peritonitis.
Miliary tuberculosis of the spleen.
Stricture of left ureter.
General peritonitis.
Fatty metamorphosis of the liver.

3. *Historical landmarks*

Obsolete tuberculosis of mesenteric glands.
Scar of old operation wound, right nephrectomy.

DR. RICHARDSON: The examination was made through an incision in the anterior abdominal wall.

The peritoneal cavity contained about 1000 c.c. of thin, pale, somewhat opalescent purulent fluid. There were numerous pale grayish granular adhesions extending between the coils of the intestines and between the liver and the diaphragm with here and there recent softer fibrinopurulent adhesions. The peritoneum showed patches of fibrinopurulent material here and there. There were a few scattered small fibrocalcereous mesenteric glands.

The right kidney was wanting. The left kidney was moderately enlarged. The capsule stripped, leaving a pale fairly smooth surface showing numerous smaller and larger homogeneous areas. On section the kidney tissue was more or less sown with smaller and larger irregularly shaped homogeneous caseous areas. The pelvis was moderately dilated and contained much soft yellowish granular purulent material. The mucosa showed dirty reddish discoloration and was coated in places with soft yellowish slightly shaggy material. The left ureter generally was moderately dilated and its wall moderately thickened. The mucosa showed dirty grayish-red discoloration and was

coated in places with dirty yellowish granular mushy material. At a point about 6 cm. above the bladder there was a ridge-like fold in the ureteral wall where it was thicker than elsewhere and the tube considerably constricted. The ureter below the stricture was slightly dilated. The mucosa in this portion showed dirty grayish-red discoloration and was irregular and granular in places. The wall of the bladder in the region of the upper left quadrant showed much degeneration and necrosis with perforation over an area 2½ cm. across. On the peritoneal aspect there were patches of purulent infiltrated adhesions. No ureteral remains were made out on the right side except a thin cord-like strand which possibly may have been the ureter. No definite opening was made out in the bladder wall in the region of the right ureter.

The microscopic examination showed tuberculosis of the left kidney, ureter, peritoneal tissue and spleen.

Further examination was restricted.

FURTHER DISCUSSION BY DR. CABOT

The finding of a perforation of the bladder due to tuberculous ulceration is new in my experience. It must be an exceedingly rare complication, and could I think arise only as a terminal event.

She clearly belonged to the thirty-odd per cent. who ultimately die of tuberculosis of the other kidney.

CURRENT LITERATURE

ABSTRACTORS

GERARDO M. BALBONI	TRACY MALLORY
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LAURENCE D. CHAPIN	FRANCIS W. PALFREY
AUSTIN W. CHEEVER	EDWARD H. RISLEY
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SPONTANEOUS SUBARACHNOID HEMORRHAGE

SYMMONS, C. P. (*Quarterly Journal of Medicine*, October, 1924), discusses this subject, analyzing the cases in the literature and reporting three new ones of his own. The author excludes from consideration cases of traumatic origin and those of rupture of intracerebral hemorrhage into the ventricles or meninges.

The commonest cause is arteriosclerosis of the cerebral vessels, with rupture of a small artery at the base of the brain. Next to this comes intracranial aneurysm, which, contrary to what obtains elsewhere in the body, is usually of arteriosclerotic rather than of syphilitic origin. Rarely it is the result of one of the diseases of the blood, such as pernicious anemia, leukemia or hemophilia. There remains a large group, one-third of the cases in the literature, in which the etiology is obscure. These cases occur

mostly in young people, and the writer believes that many of them are due to a peculiar type of aneurysm small and easily overlooked at autopsy. These aneurysms occur in the young, sometimes in children, and without evidence of disease of the circulatory system elsewhere. They are probably the result of localized congenital defects in the arterial wall. Occasionally small cerebral aneurysms occur as the result of emboli in subacute bacterial endocarditis.

The clinical course varies with the size and duration of the hemorrhage. The onset is always sudden, with loss of consciousness. In one group coma persists and leads to death in a few hours. In another, more interesting group the patient soon recovers consciousness and shows signs of meningeal irritation, stiffness of the neck and Koenig's sign, together with mental confusion. This state may be followed by gradual recovery, or a second or third attack of hemorrhage may prove fatal. In such cases "aseptic" fever and leucocytosis may be expected as the result of absorption of extravasated blood, and urobilin may appear in the urine. The meningeal signs are the result of the irritating effect of the blood, which acts as a foreign body.

Two additional signs of great interest should be noted. The first is the appearance of large subretinal hemorrhages, situated on or near the optic disc, and due to the passage of the blood along the sheath of the optic nerve. This has been found in three cases, also in one verified case seen by the reviewer, and probably would be recorded oftener if routine examinations of the eyes were made.

The other sign is massive albuminuria, up to one per cent., which appears soon after the onset and clears up in convalescence. This is probably the result of irritation of the floor of the fourth ventricle, for Claude Bernard sometimes found albuminuria as a result of puncture at this point.

The diagnosis depends on the clinical picture and the characteristic findings in the spinal fluid, which are three in number: (1) An even admixture of the blood in successive tubes; (2) the absence of blood clot on standing, and (3) an orange, yellow or brown color of the supernatant fluid on centrifugation. These signs indicate hemorrhage into the subarachnoid space. They are also met with—a point which the author does not mention—in pachymeningitis hemorrhagica interna, a condition which may lead to diagnostic difficulty.

[W. T.]

THE EFFECT OF IODINE ON HYPERTHYROIDISM

COWELL and MELLANBY, E. (*Quarterly Journal of Medicine*, October, 1924), have made an important contribution to this fascinating topic. Until recently it was generally accepted that iodides were harmful in hyperthyroidism. In 1920, however, Neisser reported very favorable results from the administration of small doses, and since then it has been shown by Loewy and Zordek in Germany, and by Means and others in this country, that the use of iodine is accompanied by a marked fall in the B. M. R. (basal metabolic rate). Cowell and Mellanby have made observations on the effect of iodides given to patients who were not operated upon and over long periods of time, controlling their results by frequent measurements of the B. M. R. Their work may be summarized as follows: In every case clinical improvement and a drop of B. M. R. was noted, beginning one week after the drug was started. This was followed after a few weeks by a reaction, when, in spite of continued administration of iodide, the pulse-rate and B. M. R. rose, though usually not to the former level. In spite of this, however, most patients continue to gain in weight and strength. Occasionally a rather severe reaction was observed. On continuing the treatment the B. M. R. fell again, but usually remained higher than normal, the patients continued to gain weight and were restored to a condition of

comparative health, though some degree of tachycardia and nervousness persisted. On omitting the iodide there was a prompt return of symptoms and rise of B. M. R., which could always be controlled by resuming the treatment.

The effect on the thyroid gland was variable. Usually it became harder and pulsation ceased; occasionally there was a reduction in size.

The usual dose was two grains a day. Better results were not secured with larger doses; the minimal effective dose was less than one-half grain per day.

The authors strongly recommend the use of iodide as an adjunct to the medical treatment of hyperthyroidism and to prepare patients for operation. It should be noted, however, that none of their cases was very severe, and that the treatment is in no sense curative, and must be continued indefinitely. The severe cases will probably continue to require operation, but the administration of iodine in some form will be of inestimable benefit in preparing them for surgery. The milder cases can be greatly benefited by iodides to an extent obtainable with no other drug. [W. T.]

BILATERAL ECTOPIC KIDNEYS

DARNER, H. LAURAN (*Journal of Urology*, September, 1924).

This anomaly is exceedingly rare and its clinical diagnosis, unless complicating urological lesions develop, will continue to be infrequently made. Wherever there is a congenital anomaly of any sort, anomalies of the genito-urinary tract should be kept in mind, and where there is an anomaly of the external or internal genitalia with smooth, firm masses in the true pelvis a clinical diagnosis may occasionally be correctly made. Pelvic kidneys are usually fused. After a thorough search of the literature the author was able to find but 16 cases in which both kidneys were in the pelvis and not fused. The other interesting feature of the case is the fact that the bilateral masses which were palpable on vaginal examination were wrongly interpreted as inflammatory tubo-ovarian masses. The clinical diagnosis seemed additionally verified by the frequent exacerbations of the infection.

[B. D. W.]

PRIMARY CARCINOMA OF THE FEMALE URETHRA—CASE TREATED BY DIATHERMY

O'CONOR, VINCENT J. (*Journal of Urology*, August, 1924).

In this instance a very extensive urethral carcinoma was locally destroyed with subsequent complete healing of the urethral and vulval regions. Complete urinary function was retained and local symptoms were completely relieved by the procedure. It is suggested that diathermy offers a method which is superior to any previously described in effecting the local destruction of carcinoma of the female urethra. This is especially true if we bear in mind the minimization of metastases by the complete sealing off of the surrounding tissues during the slow coagulation. The procedure is devoid of operative shock, a general anesthetic is unnecessary, postoperative discomfort is slight, and, even in advanced cases, urinary control can be maintained.

[B. D. W.]

KINKS OF THE URETER

SISK, IRA R. (*Journal of Urology*, September, 1924).

Kinks of the ureter occur not infrequently and may cause attacks of severe pain over long periods of time without producing much dilatation of the pelvis or calices of the kidney. They are easily overlooked both at the time of examination and at operation. For the purpose of bringing them out, it is advisable

to inject a medium through the ureteral catheter the point of which is below the kinked portion of the ureter. Surgery is the treatment of choice, especially in cases of long standing. Nonsurgical treatment gives relief in some cases for a considerable period of time.

[B. D. W.]

PULMONARY INFECTION WITH THE SPIROCHAETAE AND FUSIFORM BACILLI OF VINCENT

McNEILL, C. (*Johns Hopkins Hospital Bulletin*, November, 1924), summarizes his work on the pulmonary infection with the spirochaetae and fusiform bacilli of Vincent as follows:

The spirochaetae and fusiform bacilli of Vincent are widely distributed throughout the entire world, and have been known to cause a great variety of lesions in the human body, including infections of the skin, external ear, middle ear, gums, mouth, throat, gastro-intestinal tract and bronchi. To this list is added an infection of the parenchyma of the lung—a disease that may be clinically and roentgenologically indistinguishable from pulmonary tuberculosis, but which is easily diagnosed from a stained smear of the sputum, and heals like magic under intravenous salvarsan therapy. A case is reported in detail with full clinical, laboratory and X-ray studies.

[J. B. H.]

CALCIFICATION OF THE PROSTATE

McKENZIE, D. W., and MAGNUS, I. SENG (*Journal of Urology*, September, 1924).

Report of a case of a man of 53 who had had attacks of epididymitis, alternate sides, and came into the hospital with a urethral discharge and abscess of left epididymis; no gonococci, no acid-fast bacilli. X-ray showed ovoid shadow suggesting the size and contour of a normal prostate and about the size of a small hen's egg, lying in horizontal position, just behind the symphysis pubis. After extirpation of the left epididymis and testicle, a pathological diagnosis of tuberculosis was made. Later the suprapubic removal of a prostatic calculus was performed with difficulty. No glandular tissue of the prostate was found; probably of tuberculous etiology. Recovery was uneventful.

[B. D. W.]

DIATHERMY: A SPECIFIC FOR GONORRHEAL EPIDIDYMITIS

CORRUS, BUDD C., and O'CONOR, V. J. (*Journal of Urology*, August, 1924).

Diathermy provides us with a method of inducing heat within the body of the epididymis, testis and spermatic cord. By using the electrode described the gonococcus can be rapidly destroyed in its local invasion, obviating prolonged inactivity or operative interference. The authors' results with this original method have been so uniformly satisfactory that they feel free to describe it as one which is specific for gonorrheal epididymitis.

[B. D. W.]

HYDROCELE OF THE EPIDIDYMISS

THOMAS, B. A., and THOMPSON, D. C. (*Journal of Urology*, September, 1924).

In this patient, four hydroceles were present at the same time—a hydrocele of the tunica vaginalis and a hydrocele of the epididymis on each side, the latter being entirely distinct from the former. Identical on both sides, except the left was about twice as large as the right.

[B. D. W.]

RECENT ADVANCES IN THE DIAGNOSIS AND TREATMENT OF URINARY LITHIASIS

CUMMING, R. E. (*Journal of Urology*, October, 1924).

The evolution of diagnosis and treatment has shown: Increased possibilities of non-operative cure of impacted ureteral stone. Nearly all recently impacted stones can be removed cystoscopically.—Definite opportunity to reestablish healthy activity of the kidneys in the presence of huge unilateral or bilateral stone with advancing infection.—Certain disadvantages of non-operative treatment of bladder stone.—Certain disadvantages of pyelolithotomy, which is usually preferable to nephrolithotomy.—Direct relationship to infections with obvious necessity of ridding an individual of extrarenal foci, along with the cure of the lithiasis.—Necessity for early radical treatment of anuria or intrarenal retention due to stone, together with the wisdom of prolonged conservative treatment where adequate drainage persists.—Renal and ureteral colic is due to distension rather than mechanical irritation of calculi and is coincident with advancing infection and renal destruction.—Silent calculi frequently present the gravest clinical problems, and the fewest symptoms attend the inoperable case.—Pelvic drainage and lavage is of great value in bilateral stone cases, whether inoperable, or prior to operation, and in the post-operative care.—Ureteral calculi often cause more damage to the kidney than renal calculi; often nephrectomy is necessary as the result of an impacted lower ureteral calculus.

[B. D. W.]

THE TREATMENT OF POST-ENCEPHALITIC PARKINSON SYNDROME WITH HYOSCIN HYDROBROMIDE, WITH A NOTE ON THE MENTAL ATTITUDE IN THIS SYNDROME AND A REPORT OF 18 CASES

HOHMAN, L. B. (*Johns Hopkins Hospital Bulletin*, October, 1924), reports the results of his experiences with the use of hyoscin hydrobromide in the treatment of post-encephalitic Parkinson syndrome, with the following conclusions:

1. Hyoscin is a very valuable palliative remedy in post-encephalitic Parkinson syndrome.
2. Hyoscin hydrobromide may be prescribed in doses as high as 1/50 gr. four times a day.
3. The change in mental attitude (mental and emotional rigidity) should be understood to form a part of the disease.

[J. B. H.]

DIVERTICULUM OF THE URETHRA

SISK, IRA R. (*Journal of Urology*, August, 1924).

The cause of the diverticulum is obvious, as the patient unquestionably ruptured his urethra, had an extravasation of urine, and developed the diverticulum at the point where the urethra ruptured. It is interesting to note that the stricture was located posterior to the diverticulum, and there seemed to be no obstruction anterior to the diverticulum.

[B. D. W.]

VAS FUNCTION AFTER VASOTOMY

ROSS, W. L., JR. (*Journal of Urology*, August, 1924).

The report is submitted not with the idea of proving that vasotomy is never followed, in the human subject, by occlusion of the vas, but that it is certainly not a uniform sequel of operation. The evidence presented here would seem to be at least as worthy of consideration as that of Brans from his six dogs.

[B. D. W.]

THE BOSTON Medical and Surgical Journal

Established in 1828

Published by The Massachusetts Medical Society under the jurisdiction of the following-named committee:

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Material for early publication should be received not later than noon on Saturday. Orders for reprints must be sent to the Journal office, 126 Massachusetts Ave.

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Communications should be addressed to The Boston Medical and Surgical Journal, 126 Massachusetts Ave., Boston, Mass.

THE SPAHLINGER TREATMENT OF TUBERCULOSIS

So far as can be learned at the present time the expectation of a cure for tuberculosis is again doomed to disappointment. For a time there was considerable interest in the possibilities of the Spahlinger serum and vaccine and it was reported that a movement was under way in England to provide substantial financial assistance to the originator of the supposed curative agents. The history of the man and his methods present some interesting features.

Spahlinger was a student of medicine at the Geneva University but turned his back on medicine before finishing the course. He studied law and gave that up. Early in life he worked in a small laboratory fitted up by his father. After giving up medicine and law he devoted himself to laboratory work with the hope of developing a cure for tuberculosis. He spent nearly half a million dollars which was all the available money which he and his father controlled and he is now without funds and the probability is that the work will be abandoned unless some persons or agencies come forward with large contributions. The suspicion exists that the publicity campaign in England and Australia had for its main object creating a supporting interest in his work.

Although he was given £30,000 through the British Red Cross on condition that a certain quantity of serum and vaccine should be supplied within a given period, this sum was returned because he could not meet the conditions. There is a rumor that he was offered a million dollars by a private company for his plant and the secrets of manufacture of his products. This he declined on the ground that the purchasers would probably produce an inferior article and would secure a monopoly. He did indicate his willingness to accept £100,000 from a colonial government because he felt that a government would be less likely to hurry production. Everything which this man has done appears to indicate that he is not planning to make money out of his alleged inventions unless he is playing for a much larger stake. Some people who have made investigations believe that he is honest although mistaken. Lack of scientific spirit has been indicated by refusal to have a committee of experts, to be appointed by the British Ministry of Health, investigate his products and methods. The excuse given was that there was not a sufficient amount of serum available.

Sir David Hardie, M.D., LL.D., of Brisbane, Australia, made a personal investigation and published his report in the *Medical Journal of Australia* in the issue of November 22, 1924. In his account the foregoing statements appear in substance. He also reports that he spent a week in Geneva, met Mr. Spahlinger and inspected his establishment. The premises included ample accommodations for horses, cows, goats, guinea pigs and laboratories.

It was claimed by Spahlinger that he had isolated twenty-two different toxins of the tubercle bacillus and through series of inoculations had obtained a so-called partial serum which cures tuberculosis. He also makes a polyvalent serum and vaccine. The process of manufacture covers four years. Sir David Hardie could find no patients for examination except in the person of one assistant who, it was claimed, was a good example of complete recovery.

Dr. Stephani, of Montana, Switzerland, was said to be enthusiastic about the treatment and Sir David was advised to visit him, but here again no patients were under this treatment because of lack of serum and vaccine, although Stephani claimed to have treated three hundred patients, mostly Russian refugees, with 80% recoveries from serum treatment and 77% from vaccine.

Sir David finishes his report as follows:

CONCLUSIONS

(1) So far as I know, with the exception of the evidence of a very few, which to my mind is unconvincing, medical evidence in support of the treatment is wanting.

(2) At the most treatment is in the experimental stage.

(3) On account of the limited supply of material, treatment is practically at a standstill, so that it is difficult to find cases and impossible from personal knowledge to express an opinion on its merits.

(4) The case is one of "not proven." It has neither been proved nor disproved.

(5) Mr. Spahlinger would have shown greater respect to the spirit of science and scientific research, if he had frankly published the experimental data on which the treatment is based and so given others an opportunity of testing their soundness; and unless he gives his compliance to the appointment of a committee of experts to make a complete investigation and a favourable report be received thereon, no government or public body would in my opinion be justified in advancing money in support of his treatment for tuberculosis.

This report shows that the skepticism of the great majority of competent physicians is logical, and that whenever the broad scientific spirit is lacking in claims of wonderful cures the profession is justified in demanding open methods and opportunity for independent investigation.

The spirit and methods of Pasteur should be the guide to scientific work.

ANOTHER TAX ON ALCOHOL PRESCRIPTIONS

THE medical profession will be interested in the fate of the bill which Representative Adlow of Roxbury has recently filed with the Clerk of the House. This bill provides for a tax of one dollar on every prescription issued by a physician for the purchase of alcoholic liquors from a druggist. It is stated in the *Transcript* that there are about 6,000 physicians in the state who are each allowed 400 prescriptions a year; by a simple process of multiplication, it is estimated that from this source a revenue of \$2,400,000 a year should be derived.

This contemplated legislation, which apparently meets with the Governor's approval, appears to us to be singularly undesirable. To take up the lesser criticism first, it may be suggested that, although there are 6,000 physicians in the state, only 4,000 of them have taken out permits to prescribe alcohol. Of those who hold such permits, very few utilize all of their allotted prescription blanks. The revenue will be nowhere near so large as the exponents of this tax appear to believe.

Our second criticism has to do with the principle involved in this form of taxation. If the alcohol prescribed is to be regarded as a luxury, and therefore properly taxable, physicians should not be allowed to prescribe it at all. If, on the other hand, it is to be regarded as med-

icine, it should no more be taxed than should bromides or strychnia.

The cost of alcohol is already prohibitive enough, even for its legitimate uses. A physician wishing to get a gallon of alcohol for laboratory purposes must pay \$7.50 for it; that about nine-tenths of this charge is due to taxation and to unknown factors is proved by the fact that hospitals purchasing tax-free alcohol can get the best grade at a price of 78 cents a gallon, with a probable advance in the near future.

The contemplated tax upon prescriptions will of course have to be borne by the patient, not by the physician. Assuming that the former is really in need of alcohol, he should be able to obtain it without the payment of such tremendous premiums as are being accumulated.

Therapeutic Column

QUINIDINE SULPHATE IN AURICULAR FIBRILLATION (ABSOLUTE CARDIAC ARRHYTHMIA)

BY PAUL D. WHITE, BOSTON

INTRODUCTION

ONE of the most useful drugs in cardiac therapy at the present day is quinidine sulphate. And yet it is unknown to or feared by the great majority of physicians whether in general or in hospital or in special practice. The reasons for this fear and this ignorance are several. In the first place it is not realized that cases for its use must be carefully selected and that if they are so selected the drug is probably without danger if given with care. Secondly the striking benefits frequently observed in well selected cases are not known. And thirdly it is not appreciated that the method of administration of the drug is important to obtain the best results. Because digitalis and morphia have been known to cause toxic symptoms and even death we do not withhold these valuable drugs from cases in which they are indicated, and so it should be with quinidine.

ACTION

Quinidine, an isomer of quinine, acts, best as the sulphate, to restore normal rhythm in the presence of auricular flutter or auricular fibrillation, and to prevent the occurrence of these abnormal rhythms when they tend to occur. The drug apparently acts directly on the auricular musculature and by increasing its refractory period tends to abolish the circus movement shown by Lewis to be the cause of auricular fibrillation and of auricular flutter. The reason why quinidine is not always successful is probably to be explained by the fact that it has a second effect on the circus movement to slow its speed. This effect in some cases coun-

teracts the other and so prevents the abolition of the circus movement.

In restoring normal rhythm quinidine sulphate acts therapeutically in cases of auricular fibrillation in two ways. In the first place the efficiency of the heart's action is definitely greater with normal rhythm than with auricular fibrillation and this increase in efficiency may represent the difference between sufficiency and insufficiency of the circulation. Secondly, most people feel much more comfortable with normal rhythm than with auricular fibrillation, the palpitation due to the latter being very distressing to individuals with sensitive nervous systems. Moreover with normal rhythm in the absence of congestive failure it is not necessary to give digitalis daily as usually has to be done in auricular fibrillation even without congestive failure.

INDICATIONS FOR ITS USE

The condition par excellence for which quinidine sulphate should be given is paroxysmal auricular fibrillation no matter what the underlying cause—arteriosclerotic, rheumatic, thyroid or unknown. Daily rations often abolish the paroxysms or reduce them in number, duration or both. The other very favorable condition for which the drug should be given is recently established permanent auricular fibrillation in the absence of congestive failure, past or present, in the absence of a history of embolism and in the absence of mitral stenosis of any marked degree. Patients who have had auricular fibrillation for less than a year, and especially for less than six months, and who do not show congestive failure or mitral stenosis usually respond to quinidine therapy by a return to normal rhythm and a persistence of normal rhythm for months or years, especially if the drug be continued for awhile in daily rations. Relapses can be treated like the original condition unless they become so frequent that it is best to fall back on digitalis, allowing the fibrillation to persist. Even patients with mitral stenosis, if the valve lesion is not marked and there has been no congestive failure or embolism, have been much helped by the quinidine if the fibrillation has been of recent origin, preferably only a few weeks. The irritability of the heart associated with hyperthyroidism with the production of paroxysmal or permanent auricular fibrillation is particularly benefitted by quinidine, especially after removal of the hyperthyroidism by operation or otherwise. Even chronic badly damaged hearts with congestive failure, valve lesions and auricular fibrillation of many years' duration were helped by restoration to normal rhythm in a series of 75 unselected cases reported by Viko, Marvin and White two years ago but it is best not to select such cases in treatment with quinidine today. Two-thirds of all cases with permanent auricu-

lar fibrillation can be restored to normal rhythm by quinidine, but only one-half of this number is really benefitted, the others having early relapse to auricular fibrillation or because of congestive failure or rapidly progressive heart disease not being benefitted by the restoration of normal rhythm.

Thus quinidine sulphate is indicated in about one-third of all cases with permanent auricular fibrillation and in almost all cases with paroxysmal auricular fibrillation. Since the cases of paroxysmal auricular fibrillation make up approximately one-half of all patients showing auricular fibrillation it is evident that quinidine sulphate is indicated in more than half of all cases with auricular fibrillation, though it is not of course always successful in them.

Auricular flutter, much rarer than auricular fibrillation, may be dismissed with the statement that it has exactly the same indications as auricular fibrillation. Quinidine sulphate often helps, but we have not so complete a knowledge of its efficiency in flutter as we have in fibrillation. Paroxysmal tachycardia may be helped, stopped, or prevented by quinidine, but in my experience it is far less influenced than is auricular fibrillation. Even less may be said concerning premature beats or extrasystoles. In heart block quinidine is contraindicated.

Of course quinidine is in no manner to be used instead of digitalis. Its action is very different. It does not strengthen the heart, or slow the ventricular rate in auricular fibrillation, unless normal rhythm is induced. Both digitalis and quinidine sulphate may be given simultaneously to the same patient if there is indication for both drugs, and both drugs are often effective when given in this manner.

METHOD OF ADMINISTRATION OF QUINIDINE SULPHATE

In the first place all cases should be tested for idiosyncrasy to quinidine. Such idiosyncrasy is very very rarely the cause of inability to use the drug. In about 200 cases in my experience I have encountered a disagreeable reaction to small doses in only one case, a woman who showed marked skin irritability after a few grains. The rarely reported collapse and serious respiratory disturbances due to marked idiosyncrasy should be avoided by a test dose of 2 or 3 grains of quinidine sulphate by mouth. If there is no reaction after such a dose we may continue as follows:

In paroxysmal auricular fibrillation, flutter, or tachycardia daily rations of 3 to 12 grains may be given for weeks, months or years as needed. Six grains, consisting of two 3 grain tablets or capsules, are the usual daily dose found most effective in preventing the paroxysms. If the paroxysms occur at any definite time of day or night the six grains may best

be given in one dose a few hours before the paroxysms are due. Sometimes the dose may be divided in whatever way the best results are obtained, from three to six grains morning and night. After a few weeks or months of this rationing the drug may be discontinued for awhile to see whether or not the heart is less irritable, and then resumed or not as indications show the need. If twelve grains a day are insufficient to prevent the paroxysms it is probably best to stop the quinidine and, allowing the fibrillation to become permanent, to ration with digitalis.

In the treatment of permanent auricular fibrillation the best plan in my experience has been to start large doses of quinidine sulphate the day after the test dose has been given. Six grains five times a day at two hour intervals has been an excellent method. Having succeeded with this dosage with a higher percentage of successes than most of the reports in the literature show, I should advise its adoption. *The apex heart rate and rhythm are to be ascertained each time before the next dose of six grains is due and the drug stopped if normal rhythm or toxic symptoms be present.* Daily rations of 6 grains had best be given for a few weeks after the restoration of normal rhythm.

Usually in successful cases only a few doses of quinidine sulphate are needed, normal rhythm being restored on the first or second day of treatment (after about 18 to 36 grains or 1.2 to 2.4 grams). However, some cases are more resistant and may need three or four days or even a week of quinidine (90 to 210 grains or 6.0 to 14 grams) and in a few cases I have succeeded by increasing the daily dose, in one case, even up to 60 grains (4.0 grams) for one day. If normal rhythm has not returned after one week it is wise to stop the drug though it may be tried again later in the same way. In a few cases normal rhythm is restored only after two or three attempts. As a rule, however, the earlier the restoration to normal rhythm the more permanent is this restoration. Relapses should be treated just like the original condition. If toxic symptoms arise the drug should be reduced in dose or discontinued.

Quinidine sulphate may be given in the treatment of paroxysmal or of permanent auricular fibrillation whether the patient is bed-ridden or ambulatory. Although I have been successful in several intelligent cases in restoring normal rhythm with the patient ambulatory and even at light work it is much wiser to have the patient in bed under observation while giving the courses of large doses.

TOXIC EFFECTS

Very few cases are so susceptible to the drug that quinidine therapy is contraindicated. Collapse and respiratory paralysis have been re-

ported in a few cases. Quinine has a similar effect in rare cases. A small test dose should prevent these difficulties.

Not infrequently with full doses—thirty grains or two grams daily—there are mild (rarely severe) toxic symptoms: dizziness, headache, ringing in the ears, slight deafness, palpitation, diarrhoea, anorexia and nausea. Even sometimes with doses of six grains a day a little buzzing in the ears or slight diarrhoea is complained of now and then but never to a distressing degree. Rarely skin irritability occurs.

A few cases of disturbing ventricular tachycardia from quinidine sulphate have been recorded but if this is threatening the drug should be discontinued.

Finally embolism may occur in poorly selected cases in which there is cardiac thrombosis. Such cases as a rule have had congestive failure, or mitral stenosis, or long continued auricular fibrillation, or a history of embolism; they should not receive quinidine.

Cases illustrating the use of quinidine sulphate will be published later.

MISCELLANY

MEDICAL PRINTS

OPENING Monday, Jan. 12, 1925, there will be an exhibition and sale of Medical Prints, including many portraits, at Goodspeed's, 9a Ashburton Place, Boston.

The exhibition will close Feb. 9th.

INTER-STATE POST GRADUATE ASSEMBLY CLINIC TOUR OF AMERICAN PHYSICIANS TO CANADA, BRITISH ISLES AND FRANCE, LEAVING IN MAY, 1925

THE clinics and demonstrations connected with this tour will include all the different branches and specialties of medical science.

OFFICERS OF THE TOUR

President—Dr. Charles H. Mayo, Rochester, Minnesota.

Chairman of the Orientation Committee—Dr. Addison C. Page, Des Moines, Iowa.

Director of the Tour—Dr. William B. Peck, Freeport, Illinois.

Secretary—Dr. Edwin Henes, Jr., Milwaukee, Wisconsin.

AMERICAN ADVISORY COMMITTEE ON CLINIC ARRANGEMENTS

Dr. William J. Mayo, Mayo Clinic, President of Clinics, Rochester, Minnesota.

Dr. Edward William Archibald, Prof. of Surgery, McGill University, Faculty of Medicine, Montreal, Canada.

Dr. Walter W. Chipman, Prof. of Obstetrics

and Gynecology, McGill University, Faculty of Medicine, Montreal, Canada.

Dr. George W. Crile, Prof. of Surgery, Western Reserve University, School of Medicine, Cleveland, Ohio.

Dr. John B. Deaver, Prof. of Surgery, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

Dr. John M. T. Finney, Prof. of Surgery, Johns Hopkins University, Medical Department, Baltimore, Md.

Dr. Duncan A. L. Graham, Prof. of Medicine and Clinical Medicine, University of Toronto, Faculty of Medicine, Toronto, Canada.

Dr. Allen B. Kanavel, Prof. of Surgery, Northwestern University, School of Medicine, Chicago, Illinois.

Dr. Charles F. Martin, Prof. of Medicine, McGill University, Faculty of Medicine, Montreal, Canada.

Dr. Charles H. Mayo, Mayo Clinic, Rochester, Minnesota.

Dr. Alexander Primrose, Dean and Prof. of Clinical Surgery, University of Toronto, Faculty of Medicine, Toronto, Canada.

Dr. Clarence L. Starr, Prof. of Surgery, University of Toronto, Faculty of Medicine, Toronto, Canada.

May 17—The tour will start from Chicago by special trains. Physicians living in territory where it will be more convenient to go direct to Toronto will be provided with transportation direct to that city.

May 18, 19—The time will be spent in the clinics of Toronto, the physicians being the guests of the members of the teaching staff of the University of Toronto.

May 20—Trip through the Thousand Islands and the St. Lawrence Rapids.

May 21, 22—The physicians will attend the clinics of Montreal as the guests of the members of the teaching staff of McGill University.

May 23—Sail for Liverpool, arriving in that city May 31st.

An intensive professional trans-Atlantic program will take place on board ship contributed by some of America's most distinguished physicians.

June 1 to 7—The physicians will be entertained in London. The clinic arrangements in London are under the direction of the Honorary Organizer, Mr. Philip Franklin, Honorary Secretary of the Laryngological Section of the Royal Society of Medicine and Medical Director of the American Hospital, London; Sir John Bland Sutton, President of the Royal College of Surgeons; Sir Humphrey Rolleston, Bt., President of the Royal College of Physicians; Sir William Arbuthnot Lane, Bt.; Sir St. Clair Thomson, President of the Royal Society of Medicine; Sir William Hale White, Retiring President of the Royal Society of Medicine; Mr. H. I. Waring, Vice-

Chancellor of the University of London, and Mr. W. Girling Ball.

The social features of the London visit will include the conferring of Honorary Memberships upon H. R. H. Duke of York at the opening ceremony, which will be held at Barnes Hall, Royal Society of Medicine. Honorary Memberships will also be conferred upon the Prime Minister, the Rt. Hon. Stanley Baldwin; the Minister of Foreign Affairs, Rt. Hon. Austen Chamberlain; the Minister of Health, Rt. Hon. Neville Chamberlain; Sir Auckland Geddes; the American Ambassador; the Lord Mayor of London; Sir Humphrey Rolleston, Bt.; Sir John Bland Sutton and Sir St. Clair Thomson at a banquet given to the American physicians at the Hotel Cecil on the evening of June 5th.

Receptions and luncheons will be given by the Lord Mayor of London, the Presidents of the Royal Societies of Medicine and Surgery, the English-Speaking Union, the Pilgrims' Society, American Chamber of Commerce and members of the British Government. Arrangements are under way for a garden party at Lady Astor's Riverside House near London.

June 8, 9, 10—The physicians will visit the clinics of Liverpool, Manchester and Leeds, alternating among these cities.

At Liverpool, the clinic arrangements are under the direction of Sir Robert Jones, R. E. Kelly, F. R. C. S., and colleagues.

At Manchester the clinic arrangements are under the direction of Sir William Milligan and associates.

At Leeds, under the supervision of Sir Berkeley Moynihan and associates.

June 11, 12—The physicians will visit the clinics of Dublin, where arrangements are under the general management of Sir William DeCourcy Wheeler, Sir William Taylor, Sir Arthur Ball, Sir Robert Wood and their colleagues.

June 13, 14, 15—The physicians will be the guests of the members of the teaching staff of Queen's University of Belfast. The following committee of arrangements has been appointed and accepted to arrange clinics and demonstrations: Prof. Andrew Fullerton, Mr. Thomas Sinclair, Prof. W. W. D. Thomas, Prof. R. J. Johnstone, Prof. C. G. Lowry, Prof. J. E. MacIllwaine, Dr. A. J. Craig, Dr. H. Hanna, Prof. Symmers, Dr. Thomas Houston and Dr. S. Boyd Campbell.

In presenting the clinics and demonstrations the teaching staff of Queen's University will be associated with that of the Royal Victoria Hospital.

June 16, 17—The physicians will be in Glasgow, where the clinics are now being arranged by Mr. Farquhar Macrae, Mr. J. H. Pringle, Dr. Findlay Cowan and Dr. John Patrick and their colleagues. On these dates excursions will be

run to Ayr for families of the doctors and their friends.

June 18, 19—The physicians will be guests of the Royal Infirmary of Edinburgh. Clinics are being arranged by Sir Harold Stiles, Sir Norman Walker, Sir Robert Philip and associates on the staff of the Royal Infirmary.

June 20—The physicians will visit the clinics of Newcastle and the University of Durham. Mr. George Grey Turner, F. R. C. S., Sir Rutherford Morrison and other members of the staffs of the hospitals and clinics of this city have charge of the clinic arrangements.

June 22 to 27—The time will be spent in Paris. The clinic arrangements and social functions here are under the supervision of Professors Tuffier, de Martel, Gosset and Delbert in surgery, Drs. Sebilean de Fourmentel and Lermoye in Oto-Rhino-Laryngologie, Drs. Vidal, Chauffard, Sergeant, Levaditi and Martin in medicine and Prof. Morax and Delapersonne in ophthalmologie.

Social features include: A reception given by the Academy of Medicine; a large reception given in honor of the American physicians by the Municipal Council of Paris at the Hotel de Ville (City Hall); an evening reception by the Inter-Allied Assembly and a reception by Prof. Tuffier at his country home, which is located near Versailles.

June 28—First sailing for home.

July 4—Second sailing, permitting physicians to attend the clinics of Lyon and Strasbourg.

In addition to the main tour an opportunity will be given to the physicians to visit practically all the clinic centers of Europe through extension tours.

Prices	Chicago Montreal to to Chicago Montreal or New York	
(e) with first-class, high grade hotels and cabin ocean passages	\$990.00	\$880.00
(b) with first-class, medium grade hotels and cabin ocean passages	910.00	800.00
(a) with moderate priced hotels and third-class ocean passages	750.00	640.00

It is necessary in order to reserve space for the tour to send to the office of the Managing-Director the sum of \$65.00 per person. This amount will be applied on the price of the tour and if, for any reasons, the applicant for space finds that he cannot go, the money will be refunded immediately, if demand is made within six weeks of sailing time. The reservations will be assigned and preference given on the ship and in the hotels in the order they are received, accompanied with check for \$65.00 per person.

This tour is open to members of the profession who are in good standing in their State or Provincial Societies and their families. No restriction of territory. This invitation is understood to be extended to Canadian physicians as well as those of the United States. The Association will also be able to take care of a limited number of lay friends of the physicians. The lay friends will be afforded every advantage offered the physicians, excepting attendance upon the clinics.

For further information, write Dr. William B. Peck, Freeport, Illinois.

TO MAKE SERUMS THE SAME THE WORLD OVER

The Health Committee of the League of Nations, in a report to be filed with the Council of the League, a copy of which has just reached this country, announces the plans of the Committee for the standardization of anti-toxins and serums.

Last year agreement was reached on the question of the standardization of anti-toxin for diphtheria and it is expected that during the present year the tetanus serum will be standardized.

The researches on the seri-diagnosis of blood disease will also be further carried on during the present year.

Similar attempts for the standardization of serums are being carried on in other branches of practical medicine, notably with regard to the use of insulin.

The value of the standardization of serums and anti-toxin to physicians lies in the fact that in the future the medical authorities of different nations will have at their disposal the medical knowledge, practice, and literature of all countries.

In the past the hospital statistics of London, Berlin and Paris have been of little use to the American practitioner as every country has a different kind of serum.—*League of Nations News Bureau.*

SERVICES OFFERED TO PHYSICIANS BY THE MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

FOR Diagnosis: Diphtheria culture outfits, sputum outfits for tuberculosis and pneumonia, Widal and typhoid culture outfits, and outfits for malarial and gonorrheal smears. These are obtainable from your local board of health.

Wassermann test for syphilis and complement fixation test for gonococcus. Tubes obtainable from your local board of health. Examinations for rabies, glanders, anthrax and other obscure epidemic diseases among domestic animals for the Division of Animal Industry. Specimens for these latter examinations must be submitted through this Division at the

State House. The above examinations are performed at the Wassermann Laboratory, Harvard Medical School, Boston.

Examinations of pathological tissues for diagnosis of cancer or other malignant neoplasms made at the Laboratory of the Harvard Cancer Commission, Harvard Medical School. Containers and instructions obtainable from State District Health Officers, or Room 545, State House.

For Treatment: Diphtheria antitoxin, anti-meningococcus serum, antipneumococcus serum, arsphenamine, sulfarsphenamine and bichloridol. The above materials are obtainable from your local board of health or directly from Room 527, State House, except the arsenicals which are distributed from the local venereal disease clinics.

For Prevention: Smallpox vaccine, bacterial vaccine made from typhoid, paratyphoid A and paratyphoid B bacilli, diphtheria toxin for the Schick test, toxin-antitoxin mixtures for diphtheria immunization, 1% solution of silver nitrate in wax ampules for the prevention of ophthalmia neonatorum. This material is obtainable from your local board of health or from Room 527, State House.

For Popular Education: Lectures, slides, and moving pictures are available for talks on communicable diseases, child welfare, nutrition and allied subjects relating to the public health. Details from Department of Public Health, State House.

The State is divided into seven health districts with a State District Health Officer in each. He is available for consultation and advice. His name and address may be obtained from the Department of Public Health, State House.

RELEASE OF TRYPARSAMIDE

The Rockefeller Institute for Medical Research has announced the release of the drug known as Tryparsamide for use in the treatment of human and animal trypanosomiasis (African sleeping sickness and *mal de cadenas*) and selected cases of syphilis of the central nervous system. This action is based on results reported from clinical investigations which have been in progress for several years. The drug will be manufactured by the Powers-Weightman-Rosengarten Co. of Philadelphia, and will become available through the regular trade channels about January 1, 1925. In releasing the drug for the benefit of the public, the Rockefeller Institute desires it to be known that the Institute does not share in any way in profits that may be derived from the sale of the drug and that, with the cordial coöperation of the manufacturers, provision has been made for the maintenance of a schedule of prices on as low a basis as possible.

MIDWIVES IN NEW YORK CITY

THE midwife question is becoming less and less of a problem as mothers learn the advantages of going to a hospital for confinement. During the year only 27,466 babies were delivered by midwives—21.30 per cent. of the total recorded births, as compared to 40.35 per cent. in 1909, when the work of midwife supervision was first undertaken in New York City.—*Dept. Health's Bulletin, New York City.*

NEW YORK HAS 30 NEW CASES OF TYPHOID

NEW YORK—Thirty new cases of typhoid were reported during the last 24 hours, the health department announced Dec. 27. This compares with 16 cases reported during the preceding 48 hours.

Notwithstanding the increase there is no epidemic of typhoid, Health Commissioner Dr. Frank J. Monaghan said.—*Boston Herald.*

DEATHS AND BIRTHS IN BOSTON DURING 1924

THE total number of deaths occurring in Boston during the past year was lower than for the previous two years. Of the total number of deaths recorded 1849, or 16% of the entire total, were deaths of persons who did not reside in this city.

The number of infant deaths recorded for the year was 1455, the smallest number of children dying under one year of age ever reported in Boston, showing a rate of 73.86 per 1000 live births. This is the lowest rate Boston has ever attained in this respect, and it is especially gratifying when we consider that of this total 280 deaths, or 19%, were of children who died in Boston but were not residents of the city. Boston's percentage of non-resident infant deaths is far in excess of any city in the country, and this includes New York, whose population is eight times larger. If Boston's percentage of non-resident deaths (infants) were excluded, the rate here would be among the large cities in the world having a minimum baby death rate.

It is encouraging to note that tuberculosis (pulmonary) is still declining and the number of deaths this year from this disease is the lowest ever reported in Boston. Lobar pneumonia is far lower than for the previous two years. Influenza, measles, scarlet fever, whooping cough, diphtheria, anterior poliomyelitis, cerebrospinal meningitis, broncho-pneumonia, heart disease, kidney disease, arteriosclerosis, accidental and violent deaths, and the total deaths over 60 years of age all show declines over last year.

Typhoid fever, cerebral hemorrhage, diarrhea and enteritis (under two years) and deaths from prematurity show increases over last year.

Deaths from cancer, 1186, continue to increase annually. Deaths from cerebral hemorrhage also continue to increase. Deaths from alcoholism were 198, an increase over the past two years and a great increase over 1921, when deaths from this cause were 70.

PRELIMINARY STATEMENT OF DEATHS AND BIRTHS IN BOSTON DURING THE CALENDAR YEAR 1924, RESIDENTS AND NON-RESIDENTS INCLUDED

	1924	1923	1922
Number of deaths, all causes.....	10,940	11,503	11,423
Death rate per 1000 population, including non-residents.....	14.08	14.93	14.95
Live births.....	19,700	19,020	18,552
Births per 1000 population.....	25.36	24.69	24.28
Infant deaths, including non-residents.....	1,455	1,569	1,720
Infant mortality rate.....	73.86	82.3	92.7
Deaths of mothers due to pregnancy.....	145	137	156
Death rate per 1000 live and still births.....	7.1	7.0	8.1

Total deaths from

Typhoid fever.....	15	10	11
Measles.....	44	57	46
Scarlet fever.....	52	58	45
Whooping cough.....	23	109	84
Diphtheria.....	169	173	143
Influenza.....	31	97	66
Pulmonary tuberculosis.....	667	677	724
Anterior poliomyelitis.....	6	10	11
Cerebrospinal meningitis (epidemic).....	19	22	11
Lobar pneumonia.....	478	635	669
Broncho-pneumonia.....	535	678	601
Cancer.....	1,186	1,142	1,123
Heart disease.....	1,740	1,880	1,765
Cerebral hemorrhage.....	749	705	644
Kidney disease (nephritis).....	583	649	646
Arteriosclerosis.....	390	404	498
Alcoholism.....	198	170	117
Diarrhea and enteritis (under 2 years).....	165	148	210
Premature birth.....	379	355	373
Accidental and violent (external causes).....	785	805	797
Total deaths over 60 years.....	3,985	4,265	4,066

F. X. MAHONEY, M.D.,
Health Department, City of Boston.

DEFENSE DAY AND THE MEDICAL RESERVE

On September 12 over six millions of men, in civil and military life, voluntarily pledged themselves to serve their country in her hour of need. This was done so quietly and understandingly that the public did not realize the significance of the act.

While this spontaneous tribute to Americanism was most gratifying to the War Department, it was especially satisfactory to the Surgeon General's Office to note how the M. O. R. C. responded to the call. In New York City the Army Building and armories swarmed with medical officers who cheerfully laid aside professional work to report in person for duty. There could be no stronger proof of the organization

and steady growth of the Medical Reserve Corps, which is literally "first in war and first in peace."

We are rather proud of our work during the war, when 30,000 doctors from civil life were enrolled in the Corps, at least one-fifth of whom served overseas, and the same spirit exists now, and will forever.

At the recent Clinical Congress of the American College of Surgeons it was a *soldier* who bore the symbolic mace at the head of all public processions, a true evidence of the fact that the 6,000 Fellows are united in their devotion, not only to the high ideals of the college but to the higher one of service to the flag. The close relation of the regular medical officers to our institution serves to stimulate and keep alive that patriotism which lies deep in the hearts of the medical profession, sometimes sleeping, but never dead.

Moreover, we shall never forget our allies, with whom we served in camp and field during the war, nor have we cherished that latent hate and suspicion towards a vanquished foe which prevails in civil life. French or German, a doctor is always a doctor, and as soldiers do, are the first to forgive and forget. As Voltaire said: "*A qui conquie pense il ny ni la langue, ni le pays.*"—H. C. C., *The Military Surgeon*, Vol. 55, No. 6.

WASHINGTON PHYSICIANS SET FEES

A SCALE of minimum and maximum fees to be charged by physicians at Washington has been fixed by the Medical Society of the District of Columbia. The importance of the case and the responsibility attached to it is the criterion for setting the amounts. Minimum fees range from \$2 for a minor office consultation or a word of advice over the telephone to \$300 for certain major operations. Maximum charges for similar service range from \$10 to \$5,000.—*The Nation's Health*.

LEGISLATIVE NOTES

THE members of the Massachusetts Medical Society, particularly the members of the Auxiliary Committee on State and National Legislation, are earnestly requested to familiarize themselves with the facts emphasized by Dr. Samuel B. Woodward in his article on "Vaccination" which appeared in the issue of January 8, 1925. If the members of the Society will take advantage of every opportunity of presenting this evidence to the members of the Legislature residing in their respective districts, much valuable aid will be given to the Legislative Committee.

Albert J. Connell has introduced a bill to provide for the inclusion of persons practicing chiropractic in the exemptions now existing in this present law. This bill will be heard by the Committee on Public Health and will be opposed by the Massachusetts Medical Society.

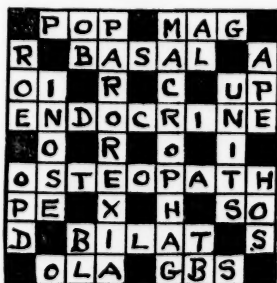
.....

Senator Hennessey has introduced a bill which will be heard before the Committee on Public Health which asks for an investigation into the affiliations with insurance companies of physicians serving in certain hospitals. This bill is to investigate as to whether and to what extent physicians serving on the staff of hospitals are supported in whole or in part by contributions from the commonwealth or from any town, incorporated hospitals offering treatment to patients free of charge, and incorporated hospitals conducted as public charities, are also in the service of insurance companies writing accident, health, disability, life, liability or workmen's compensation insurance, and whether and to what extent the interests of patients examined or treated by such physicians are prejudiced or likely to be prejudiced by such dual relation.

.....

A bill has been introduced to authorize the Department of Public Health to establish a hospital for the care and treatment of persons suffering with cancer. (Robert White, petitioner.)

SOLUTION OF THE DOCTOR'S DILEMMA



MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

DISEASES REPORTED FOR THE WEEK ENDING JANUARY 10, 1925

Diseases	No. of Cases	Diseases	No. of Cases
Anterior poliomyelitis	3	gila	7
Chickenpox	344	Epidemic cerebrospinal meningitis	4
Diphtheria	152	German measles	111
Dog-bite requiring anti-rabic treatment	2	Gonorrhea	80
Dysentery	1	Hilum tuberculosis	1
Encephalitis lethargica	1	Hookworm	1
		Influenza	11

Measles	294	Syphilis	47
Mumps	103	Tetanus	2
Ophthalmia neonatorum	18	Trachoma	1
Pneumonia, lobar	144	Tuberculosis, pulmonary	130
Scarlet fever	398	Tuberculosis, other forms	17
Septic sore throat	4	Typhoid fever	12
Suppurative conjunctivitis	16	Whooping cough	99

MAINE STATE DEPARTMENT OF HEALTH INFECTIOUS DISEASES REPORTED FOR THE WEEK ENDING DECEMBER 27, 1924

Chickenpox		Pneumonia	
Bangor	1	Auburn	1
Canaan	9	Bath	1
Cushing	2	Greenville	3
Dover-Foxcroft	12	Kittery	4
Falmouth	6	Oxford	1
Lewiston	2	Portland	1
Magalloway Pl.	4	Sanford	3
Portland	16	Turner	1
Waterville	3	Van Buren	2
	55		17
Diphtheria		Scarlet Fever	
Auburn	1	Albion	2
Biddeford	1	Ashland	3
Lewiston	1	Bangor	1
Portland	3	Belfast	1
Rumford	1	Brewer	1
Solon	1	Calais	6
Thomaston	1	Damariscotta	1
Waterville	1	Dover-Foxcroft	1
	10	Lewiston	1
Gonorrhea		Limestone	1
Biddeford	1	Portland	1
Danforth	2	Wilton	1
Lewiston	1	Somerville	1
Millinocket	3	Topsham	1
Rumford	1	Weld	2
Union	1		24
	9	Septic Sore Throat	
Influenza		Turner	7
Bangor	2	Syphilis	
Monmouth	2	Bath	1
	4	Livermore	1
Measles		Millinocket	1
Lewiston	1		3
Newcastle	1	Tuberculosis	
	2	Lewiston	1
Mumps		Waterville	2
Bath	4		3
Benedicta	1	Typhoid Fever	
Brunswick	1	Caribou	1
Dover-Foxcroft	1	Eagle Lake	1
Greenville	1	Portland	2
Harpwell	9	Wells	1
Kennebunkport	2		5
Lewiston	1	Vincent's Angina	
Mt. Vernon	4	Portland	1
Portland	32	Whooping Cough	
Topsham	4	Portland	2
	60		

RECENT DEATHS

McLEOD.—DR. JOHN SCOTT McLEOD, a former member of the Massachusetts Medical Society and practitioner of Roxbury, died at Los Angeles, Calif., January 9, 1925, following a long illness, at the age of 49.

His health had forced him to give up practice six years ago and during the intervening time he had lived in California. He was a graduate of Tufts College Medical School. His wife, who was Miss Minnie Detterick of Las Vegas, New Mexico, died in 1918.

GAVIN.—DR. JOHN HARRISON GAVIN, a retired member of the Massachusetts Medical Society, died at his home in Roxbury, December 9, 1924, at the age of 71. He was a graduate of Bellevue Hospital Medical College, New York, in 1892, and was retired in 1923.

CORRESPONDENCE

FURTHER CONTRIBUTIONS TO THE WORTHY CASE

Northampton, Mass., December 31, 1924.

Editor, Boston Medical and Surgical Journal:

Enclosed please find check for fifteen dollars (\$15.00), which with the postal telegraph order of Xmas day for sixty dollars (\$60.00) makes a total of seventy-five dollars (\$75.00). Contribution was made by members of the Cooley Dickinson Hospital at Northampton. This remittance constitutes a New Year's gift. Surely there must be many hospitals in the State which will take pleasure—as did we—in giving to such a cause. Let us begin the new year right and let the various hospitals of the State do as well and better than Northampton.

Sincerely yours,

THE STAFF OF THE COOLEY DICKINSON HOSPITAL.

NOTE.—This refers to the Worthy Case mentioned in the JOURNAL of December 4, 1924, and is a sample of many letters received. We have omitted the names of the donors, not having permission to publish them.

THE USE OF INSULIN

January 16, 1925.

Editors, Boston Medical and Surgical Journal:

My dear Sirs:

Often inquiries come to me from patients and doctors as to whether insulin can be administered usefully to diabetic patients in other methods than by subcutaneous or intravenous injection. My own experiments and the experiments of my friends have shown any other methods than the subcutaneous and intravenous to be valueless.

I should like to warn against the danger which might result from oral or rectal use of insulin, provided at the same time the insulin which the patient had been taking intravenously or subcutaneously was omitted. Already a death from coma in another state under such circumstances has been called to my attention.

Very truly yours,

ELLIOTT P. JOSLIN.

81 Bay State Road, Boston.

CORRECTION

January 13, 1925.

My dear Dr. Bowers:

Through an error in this office the letter concerning the newly established clinic at the Boston Y. M. C. A. was called a clinic for "surgical examinations." A reading of the body of the letter would, of course, indicate that this was a misnomer. It is a clinic for physical examinations.

Will you be kind enough to insert this note in the JOURNAL, so as to correct any misapprehension which may have been caused by the preceding article?

Yours sincerely,

NATHAN H. GARRICK,

Examining Physician.

ONE REASON FOR LACK OF INTEREST IN SOCIETY MEETINGS

To the Editor of the Journal:

We read so much now about lack of interest in District Society meetings that I am writing this to suggest one reason which holds good in the Norfolk District at least, and that is that nine out of ten meetings are held at the Masonic Temple in Roxbury in the extreme eastern corner of the district. This is no doubt a convenient place for members in Dorchester, Roxbury, or perhaps Brookline, but how can members from Franklin, Wrentham or Wellesley conveniently get there? It is in a congested district, having poor and unsafe parking facilities, and is nowhere near the center of the Norfolk District.

It seems to me that District meetings should be held as near the center of a District as possible—in this case Dedham, the county seat—and not on the very edge. If as many were held in Franklin, how many of the Boston members would be present?

I suppose there are difficulties in getting a place to meet of which I know nothing, but I have no doubt that more of the members in the western part of the District would attend meetings in such a place as Dedham, and benefit more by their membership, than can possibly be the case now when they have to go to the extreme eastern edge of the District.

Transfer the meetings to Dedham and see how many of the Dorchester fellows attend.

CHARLES A. WILLIAMS, M.D.

Needham, January 7, 1925.

LONDON LETTER

(From Our Own Correspondent)

HOW LUNATICS ARE MADE

A remarkable book has been published recently, written by Dr. T. Bulkeley Hyslop, a very well-known English alienist, who for a period of twenty years was senior physician at Bethlem Royal Hospital, London, the oldest institution for the care of insane persons in England and one of the best-known institutions of the kind in the world. The book is named "The Borderland" and the dedication is as follows: "To all my friends and relations this volume is dedicated with affectionate and tolerant regard."

In the early part of the book he says: "Everyone must have been struck by the fact that, whereas the legal provisions both for the sane and the insane are becoming more and more adequate, those for the borderlander still leave much to be desired." It would, of course, be inexpedient to control all those who are neither sane nor insane. In fact, it might prove difficult in such circumstances to procure a staff which would be adequate numerically for efficient administration.

The bulk of the book is concerned with strong attacks on what Dr. Hyslop considers the causes of the enormous increase of borderland cases in Great Britain. One of the first causes he refers to is the number and diversity of the noises of city life. He points out that during twenty years no fewer than 91 per cent. of the cases admitted to Bethlem had insomnia as a symptom or as a factor in the causation of insanity. "The causes of the insomnia are to be found in all those factors which prevent rest, and, excluding worries, there is in city life no factor more apt to produce brain unrest and its sequels of neurotism than the incessant stimulation of the brain through the auditory organs." Dr. Hyslop calls for legislation to stop the noises and goes on to say that thousands of people have meekly tolerated the noises of clocks, bells, chimes and other relics of barbarism such as Big Ben, which are nothing but baneful accompaniments of the night.

As for the strain of modern life in Great Britain he declares that the causes of this strain upon the people may be summed up in a word—"overcrowding," with its inevitable train of evils, pauperism,

famine, disease, and adds: "This condition, with its symptoms, is brought about not by increased fertility of the Anglo-Saxon race, for that has been proved to be the reverse, but partly by the invasion of the land by hordes of aliens, who mostly come as social wreckage from other lands to clog the wheels of our constitution, and to harass and impede the evolution of our race. These degenerate through our out-patient departments, they gain entrance to our hospitals, they grasp the charities established by our fathers, and we quietly nurse those who, biologically viewed, are literally drinking our life blood." "There is some reason to believe that this parasitic spread of the alien is dependent in great measure upon the lowered efficiency of the people and the diminished resisting power of our nation. Among a virile people the inefficient alien can gain no foothold."

However, the author directs his heaviest artillery against the present education system. He insists that the policy of removing children from the gutter in order to stuff their brains with knowledge results only too frequently in brain aches and their ultimate removal to the wards of an asylum. When legislation ordered the removal of children from the gutter and directed the stuffing of their heads with mental pabulum it thought it had completed its work; but it did not sufficiently realize that the gutter of the pauper child is something more than an unsavory environment. Its real gutter is that of its parentage, and a heritage of disease brought about by indulgence in alcohol and other things from which education alone is powerless to remove it. He believes that for the physical and mental welfare of the race such an imposition as compulsory education should be withheld from at least one-half of those who are now undergoing sentence in board schools.

The habit of unduly cramming precocious children is also stigmatized as an exceedingly harmful custom. Dr. Hyslop invokes the aid of strict legislation against the abuse of alcohol. He asserts that Great Britain's greatest vice is that of drunkenness.

Among the reforms which Dr. Hyslop thinks necessary to reduce the number of "borderlanders" is restriction of marriage on certain grounds, where, for example, there is consanguinity and one or other has marked neurotic taint in the family, or where there is consanguinity with neurotic taint in both parties.

BICENTENARY OF GUY'S HOSPITAL

On December 27, 1724, died Thomas Guy, the founder, "at his sole cost and charges," of the hospital just across London Bridge which bears his name. It was opened on January 6, 1725, ten days after the death of the founder, when sixty patients were admitted, and has continued to this day. Its most recent statistics show a record of close upon ten thousand in patients and practically half a million out-patients in the year.

Thomas Guy was born in 1644 or 1645, close to the southern approach of the present Tower Bridge, his father being a Thames-side lighterman. At the age of eight he was taken by his mother, then a widow, to her native place, Tamworth, and educated at the Free Grammar School there. Returning to London, he was apprenticed to a Cheapside bookseller, became a liveryman of the Stationers' Company, and set up in business for himself. He entered into successful competition with the King's Printers by importing Bibles printed in Holland. He increased in wealth and advanced in public life. He became publisher for Oxford University and represented Tamworth in Parliament from 1695 to 1708. It was during this period that he was made a Governor of St. Thomas's Hospital, which was situated at that time opposite to the present buildings of Guy's Hospital.

Eventually Guy built and endowed a new hospital—as said before, opposite to St. Thomas's main entrance in St. Thomas Street. For about 150 years the two hospitals of St. Thomas's and Guy's stood

opposite and combined for teaching purposes, until in 1825 increasing rivalry made it desirable for the medical schools to be distinct.

Guy's medical school, which constitutes part of London University, now contains some 600 students, its dental school being the largest in the world, with a further 400. It contains 644 beds, while the nursing staff numbers some 300. The hospital has been served in the past by many men who achieved great fame in medicine and surgery, the best known names being those of Sir Astley Cooper, Dr. Bright and Dr. Addison. John Keats, the poet, was a student of Guy's who actually qualified, although he never practised.

The bicentenary of Guy's Hospital, following close on the eighth centenary of St. Bartholomew's Hospital, should appeal especially to the Londoner, as Guy's is preeminently the citizen's hospital. At the present time, owing to a concatenation of adverse circumstances which have seriously affected all the hospitals of Great Britain, Guy's Hospital is in great need of financial aid. From the date of its foundation to the year 1880 no public appeal for support was necessary, and the appeal launched by the Governors this year is only the second in the two centuries of the hospital's life.

A NEW MEDICAL JOURNAL

A medical journal has been started recently which should be of especial interest to medical readers in America. This journal—by name the *Franco-British Review*—is published simultaneously in Paris and London. Its original articles are contributed in equal numbers by French and British medical men of note; in France the journal is published in French, and in Great Britain in English.

The first two issues contain papers, among others, by Drs. Comby, Lereboullet and Marcel Labbé of Paris, and by Dr. Eric Pritchard, Mr. H. J. Paterson, and Drs. A. Louise McIlroy and E. G. Cook-shank of London.

The underlying conception of the establishment of such a journal is sound from all points of view. It facilitates interchange of views between French and British physicians and surgeons, an interchange which at present is very infrequent and inadequate, owing to the unfortunate fact that comparatively few British members of the medical profession can read French, while fewer by far Frenchmen possess a working knowledge of the English language. Moreover a joint French and British medical journal tends to create and establish feelings of comradeship and amity between the members of the medical profession in both countries, and this should be a factor of no mean importance in promoting peace. Ignorance, or, rather, lack of understanding, is a main cause of antagonism between nations, and the publication of the *Franco-British Medical Review* should serve to an appreciable extent to remove some of this ignorance and lack of understanding.

The editor of this new venture is Mr. Percy Dunn of Wimpole Street, London, the well-known ophthalmic surgeon, who is also a writer of distinction—well versed and experienced, too, in the methods of medical journalism. Under Mr. Dunn's direction there is every cause to predict for the *Franco-British Medical Review* a prosperous future.

REPORTS AND NOTICES OF MEETINGS

BOSTON TUBERCULOSIS ASSOCIATION

The annual meeting and election of officers of the Boston Tuberculosis Association will be held on Friday, January 30, at 4 P. M., at 3 Joy street, Boston.

Dr. Linsly R. Williams, Managing Director of the National Tuberculosis Association, will

give the address. Dr. John B. Hawes 2d., will speak on the work of Prendergast Preventorium, and will show Lantern Slides. The Executive Secretary, Miss Bernice W. Billings, will give further details of the work of the Association. All physicians are cordially invited to attend.

AMERICAN LARYNGOLOGICAL, RHINOLOGICAL AND OTOLOGICAL SOCIETY, INC., EASTERN SECTION, ANNUAL MEETING

BOSTON, JANUARY TWENTY-FOURTH, 1925

MORNING SESSION

9.00 o'clock—Harvard Medical School, Building B.

Presentation of Cases, and of New Instruments.

Three Cases of Laryngeal Spasm associated with Intra-Cranial Hemorrhage in the New Born. Dr. Donald E. Munro (by invitation).

Symposium: Headaches and Cranial Neuralgias:

Medical Aspects, Dr. Roger I. Lee (by invitation).

Neurological Aspects, Dr. James B. Ayer (by invitation).

Endocrine Aspects, Dr. Charles H. Lawrence (by invitation).

Dental Aspects, Dr. George Wright, D. D. S. (by invitation).

Ophthalmological Aspects, Dr. Walter B. Lancaster (by invitation).

Rhinological Aspects, Dr. D. Crosby Greene.

One hour is allotted for the general discussion.

LUNCHEON

in the Building as Guests of the New England Otolological and Laryngological Society.

AFTERNOON SESSION

1.30 o'clock. Building B.

Teaching Methods, Dr. Harris P. Mosher.

Symposium: The Non-Surgical Treatment of Ear, Nose and Throat Diseases.

Nose and Throat Phases, Dr. Perry G. Goldsmith.

Ear Phases, Dr. D. Harold Walker.

Intra-Venous Therapy, Dr. Charles T. Porter.

Climatic Phases, Dr. Francis P. Emerson.

X Ray and Dietetic Phases, Dr. D. C. Jarvis.

One hour is allotted for the general discussion. Members of the Profession are cordially invited to attend these deliberations.

JOINT EVENING MEETING

with The Boston Section of the American Institute of Electrical Engineers.

Eleven participating groups, and faculty members of the local universities.

Jordan Hall, Huntington Avenue, eight o'clock sharp.

Address of welcome, Dr. William H. Haskin, Pres. Amer. Laryng., Rhinol. and Otol. Soc.

Sound: Its Electrical Analysis, Amplification and Control.

Address and Demonstration, Harvey Fletcher, Ph.D., of the Bell System Laboratories of the Western Electric Company and of the American Telephone and Telegraph Company.

Discussion: Sound Perception, Prof. Eugene A. Crockett, M. D. Introduced by Prof. D. Harold Walker, Pres. New England Otol. and Laryng. Society.

The Physical Aspects of Sound, Prof. Frederick A. Saunders, (Harvard). Introduced by Pres. S. W. Stratton, Pres. Mass. Institute of Technology.

Sound Production, Prof. Charles Adams White, Specialist in Vocal Training. Introduced by Mr. Wallace Goodrich, Dean New England Conservatory of Music.

Electrical Transmission of Sound, Prof. F. S. Dellenbaugh, Jr. (Mass. Institute of Technology). Introduced by Prof. Arthur E. Kennelly, Past Pres. American Institute Elec. Eng.

The public is cordially invited.

Part of the hall will be reserved (until 7.55 only). Doctors may obtain these tickets at the afternoon session, or by sending a stamped return envelope to Dr. Charles T. Porter, 520 Commonwealth Ave., Boston.

THE THIRD WILLIAM THOMPSON SEDGWICK MEMORIAL LECTURE

Will be given in Huntington Hall, 491 Boylston street, Boston, Mass., on Friday, January 23, at five o'clock, by Winthrop John Vanleuven Osterhout, Ph.D., Professor of Botany, Harvard University, on "Some Fundamental Problems of Cellular Physiology."

The public is cordially invited to attend.

BOSTON MEDICAL HISTORY CLUB

BOSTON MEDICAL LIBRARY, MET MONDAY, JANUARY 19, 1925, AT 8.15 P. M.

PROGRAM

1. The discovery of valves in the veins, by Canano. By Dr. E. C. Streeter.
2. The growth of understanding vs. the progress of science. By Dr. George Sarton. H. R. VIETS, M.D., Secretary.

HARVARD MEDICAL SOCIETY

THE next regular meeting of the Harvard Medical Society will be held as usual in the amphitheatre of the Peter Bent Brigham Hospital, Jan. 27, 1925, at 8:15 P. M. The program follows:—

1. Demonstration of cases.
2. Acute Serous Encephalitis, a Newly Recognized Disease of Childhood.—Dr. Charles L. Brown.
3. Some Remarks on Pernicious Anemia.—Dr. Henry A. Christian.

All members of the Medical Profession, Medical Students and Nurses are invited.

Dr. S. A. LEVINE, *Secretary.*

A physiological conference will be held Wednesday, Jan. 28, in the Bowditch Library, Building C, of the Harvard Medical School at 4 p. m. Dr. R. M. Ferry will speak on "Notes on the Change of Hemoglobin to Meet Hemoglobin."

MEETING OF THE HARVARD MEDICAL SOCIETY

THE Harvard Medical Society met on Tuesday evening, Jan. 13th, at the Peter Bent Brigham Hospital. Dr. Walter B. Cannon presided. The program began with a demonstration of two cases. The first was a young man, who had been having generalized convulsions at intervals for three or four years. Marked and acute swelling of the right eye usually accompanied the attacks. Since an operation a few years ago, involving the ethmoidal cells, a curious symptom has been recognized. This consists of a tinkling and swishing sound, easily heard with the stethoscope when the head is tipped forward and backward. The second case was a woman of fifty-eight who had been recently operated on for removal of the thyroid. This case was especially interesting because it demonstrated the progress which has been made in the last few years with regard to diagnosis and surgical treatment of cases with heart trouble, resulting from increased thyroid activity.

Dr. Roger I. Lee of Harvard University, Department of Hygiene, addressed the meeting on statistics and problems of students' health. Mortality among students, he said, is extremely low, as is well known. About fifty per cent. of the deaths among them are due to accident and suicide. Other causes are scattered, the most common being tumors, usually some type of sarcoma. Endo-carditis, scarlet fever and influenza contribute isolated cases.

Regarding morbidity, Dr. Lee said that about seventy per cent. of sick absenteeisms are due to upper respiratory infections, according to statistics gathered at Harvard. The amount of time lost from sickness is about four days per student per year or an average of two per cent. of the number of days in the Academic year. Boils, low grade sepsis, and jaundice are other more or less common forms of illness. Little can be said definitely regarding the incidence of venereal diseases as these do not lend themselves to statistical study. The actual percentage of known cases is smaller in the undergraduate than it is in the graduate schools. Ten times as many break down with tuberculosis in the latter than in the former periods. Some offer as an explanation for this, the greater demands made on graduate students with fewer opportunities for relaxation and exercise. Dr.

Lee is of the opinion that it is explained by the fact that students in graduate schools are in an age group which as a general rule is more subject to tuberculosis than younger groups. Nervous and mental breakdowns are not uncommon among students.

Another method of investigation of student health has been physical examination. This has become of greater significance with the recent adoption of standards of health. Such standards should be made with the normal variations in view. Blood pressure is far from a stable criterion. Great modifications may occur temporarily without being abnormal. Systolic murmurs are not always indicative of heart trouble. Such murmurs are found in seventy per cent. of the students but in only a small percentage is there actual heart disease. Albuminuria is common occurrence in students of the freshman class. It is characteristic of this age group and occurs much less frequently in older groups. This cannot be considered an abnormality or defect as a rule.

Statistics show that over fifty per cent. of undergraduates have had the tonsils removed and that there is an increasing number of removals of the appendix. Instances of tonsillectomy and appendectomy are found to be more numerous among students from private schools than among those from public schools.

A common fallacy is the idea that the student has a very sound nervous system. On the contrary the average student has a somewhat unstable nervous system. All at this age go through remarkable emotional disturbances. These "complexes" should be regarded as being within normal limits. The tendency has been to over emphasize slight and unimportant defects of body and mind. Dr. Johnson pleaded for recognition of wider limits of normality with reference to the health of students.

Following Dr. Lee, Dr. Harvey Cushing gave an interesting historical sketch entitled "Fame on a Biscuit." The story centred around Bath, a small hamlet in England, noted since very early history for its hot springs. It is now one of the best known spas in Europe. According to tradition, a Briton of prehistoric times, who was a swine herder and a leper, first discovered the beneficial effects of the water. During the Roman Conquest large temples and bathing establishments were built about the waters. These were destroyed by the Saxons but rebuilt after the Norman Conquest. A hospital, built there in the thirteenth century, is still standing. About the middle of the 17th century, this place became a most fashionable resort. The waters were reputed to be effective for gout, rheumatism, digestive disturbances, skin diseases and other ills. Several noted physicians flourished there at this time. Among them was one William Oliver. He wrote a book on the healing properties of the springs. He is not famous for his book, however, but for his biscuits known as "Bath Olivers." These

were designed to be part of the treatment in connection with the Bath water. They are still eaten only by those who visit this resort. Dr. Oliver confided the secret recipe for the biscuits to his coachman just before he died. The present manufacturers, James Forbes & Sons of Bath, are descendants of this coachman and still use the secret process.

Dr. Cushing exhibited a package of these historical biscuits. He also had a copy of Dr. Oliver's book from which he read an account of a cure that demonstrated the apparent efficacy of healing waters.

BOSTON HEALTH LEAGUE INC.

BOSTON COUNCIL OF SOCIAL AGENCIES—DEPARTMENT ON HEALTH

The monthly meeting of the Boston Health League was held at the North End Health Unit, 41 North Margin Street, on Wednesday, January 21, 1925, at 3.30 p. m.

In accordance with the winter program arranged by the Boston Health League, Dr. Robert DeNormandie spoke on Prenatal and Post Natal Service.

Representatives of the various agencies engaged in prenatal work in Boston discussed the program that they are carrying on.

Following is the program to which the League is committed for the winter and spring: February 11—Annual Meeting. Speakers and topic to be announced.

March 11—Child Hygiene (infant and pre-school age child).

April 8—School Child Health.

May 13—Health of the Adult:

- (a) Health Education.
- (b) Periodic Health Examinations.

THE SPRINGFIELD ACADEMY OF MEDICINE

WINTHROP BUILDING, 137½ STATE ST.,
SPRINGFIELD, MASS.

The regular meeting of the Springfield Academy of Medicine was held at 137½ State street, on Tuesday evening, January 13th, at 8.30 o'clock.

Dr. William Goodell reported some interesting cases of foreign bodies in the trachea and bronchi.

The subjects of the evening were:

1. Suppurative Diseases of the Lungs of Foreign Body Origin.
2. Suppurative Diseases of the Lungs not of Foreign Body Origin.

Lantern slides and moving picture demonstration of the cases treated at the Bronchoscopic Clinic, Philadelphia, by Dr. Louis H. Clegg and Dr. William F. Moore.

Discussion followed.

Luncheon served after meeting.

JAMES A. SEAMAN, Secretary.

THE MASSACHUSETTS GENERAL HOSPITAL TRAINING SCHOOL FOR NURSES

The Nurses' Training School of the Massachusetts General Hospital, now in its fifty-second year, held its graduation exercises at the hospital on Wednesday, January 7, with a class of fifty-three graduating.

PROGRAM

Presiding Officer, Mrs. Nathaniel Thayer, Chairman of the Advisory Committee on the Training School for Nurses; "Chanson Provencale," Dell' Acqua-Shelley, Glee Club; Address, "America's First Trained Nurse," Linda Richards; "Carry Me Back to Old Virginny"—Bland, Glee Club; Report of School, Miss Johnson; Announcement of Graduates, Mrs. Thayer; "A Song for M. G. H." (Words by Margaret Dieter, 1916), Glee Club.
Reception 9.30 to 11.

Miss Richards was born in what is now part of Potsdam, N. Y., eighty-three years ago, and, having long had an ambition to become a trained nurse, entered the Boston City Hospital as an assistant nurse while a young woman. Conditions were poor and the work arduous, she broke down in health, and resigned after three months of service. She then filed her name as an applicant at the New England Hospital for Women and Children where a training school was soon to be opened, and on September 1, 1872, was the first of a class of five to begin training under Dr. Susan Democh. The duty was from 6.30 A. M. to 9.00 P. M., with small sleeping rooms between the wards. For six months each nurse took care of her ward of six patients day and night, with three hours off duty on one afternoon every two weeks. The course was of twelve months' duration, with no hours for study or recreation.

After graduation Miss Richards served as night superintendent at Bellevue Hospital in New York for a year, leaving to take charge of the recently established Boston Training School for Nurses at the Massachusetts General Hospital on November 1, 1874. At that time there was some question as to whether this training school could survive. There was much opposition on the part of the staff, the physicians in general being in its favor, and the surgeons opposed to it. Nursing duties consisted largely in manual labor, such as washing bandages and poultice cloths, cleaning floors and washing trays and dishes. The prospect was not attractive. All this was changed, however, and after three months under the new regime it became apparent that the school would succeed, better quarters were obtained, and a definite course of instruction was established.

Desirous of obtaining better training Miss Richards sailed in 1877 for England, going to St. Thomas's and the Royal Infirmary, where she came in contact with Florence Nightingale.

Miss Nightingale wrote of her, "A Miss Richards, a Boston lady, training matron to the Massachusetts General Hospital, has in a very spirited manner come to us for training to herself I have seen her, and have seldom seen anyone who struck me so admirably. I think we have as much to learn from her as she from us."

January 1, 1878, Miss Richards organized a training school at the Boston City Hospital and in 1885 went to Japan to organize a mission school in that country. In 1890 she returned to America, and from 1891 until 1911, when she retired, she reorganized or organized ten schools in this country. Since retiring she has made her home with a niece in Foxboro, Mass.

Miss Richards spoke interestingly of her life experiences, ending with the injunction that had been given her when she graduated in 1873 to "Honor your diploma."

Miss Sally Johnson, present superintendent of the Training School, in her report mentioned many of the improvements that have been made in the training. Vacations have been increased, much of the ward drudgery has been removed from the nurses' shoulders, evening classes have largely been abandoned, psychopathic clinics have been added to the curriculum, and teaching supervisors have been added to the staff. Furthermore, and of great importance, better social conditions have been arranged for. Among the needs of the Training School are a physical and social director and more health instruction.

Following is the list of graduates:

CLASS OF 1925

Annie Gretchen Blanpied, B. A., Alamosa, Colorado; Dorothy Twombly, Dover, N. H.; Helen Bogart, Holyoke, Mass.; Dorothy Cayford, Skowhegan, Maine; Margaret Gavin, Parrsboro, N. S.; Ruth Geddes, Dorchester, Mass.; Ethel Inglis, Barre, Vt.; Ruth Jepson, erville, Mass.; Evelyn R. Cole, Wellesley Hills, Mass.; Irene Smith, Taunton, Mass.; Olive Ancill, South Lancaster, Mass.; Doris Britton, Gardner, Mass.; Doris M. Campbell, West Somerville, Mass.; Evelyn R. Cole, Wellesley Hills, Mass.; Daphne S. Corbett, Eastport, Maine; Minnie V. Daffon, Millbury, Mass.; Elizabeth Herriek, Southwest Harbor, Maine; Leonore A. Murray, Brookline, Mass.; Eleanor B. Pitman, St. Johns, Newfoundland; Edith M. Pithie, Regina, Canada; Annette H. Woodrow, Exeter, N. H.; Gladys Beardwood, Southbridge, Mass.; Alice E. Bogdan, Westfield, Mass.; Barbara Carpenter, East Douglas, Mass.; Bessie Chadwick, B. A., Athol, Mass.; Dorothy Eastman, Belleville, New York; Doris Ellinwood, Wilbraham, Mass.; Claire Favreau, Brighton, Mass.; Constance Fraser, Brookfield, N. S.; Grace Greenwood, Lake Mills, Wis.; Paule Hella, Epernay, France; Elvira Henrikson, Tacoma,

Wash.; Earlyne Kinney, Amesbury, Mass.; Elizabeth C. Leary, Andover, Mass.; Dorothy Leavitt, Lexington, Mass.; Esther Martinson, Roslindale, Mass.; Elizabeth Merry, Duxbury, Mass.; Winifred L. Moore, B. A., Cambridge, Mass.; Josephine O'Brien, Jamaica Plain, Mass.; Gertrude Scott, B. A., Rochester, New York; Candace Seeley, Washington, Conn.; Minnie Sewell, Millinocket, Maine; Ruth Sinclair, Attleboro, Mass.; Audrey Smith, West Mansfield, Mass.; Leslie Arline Smith, Tacoma, Wash.; Marian Alice Smith, Tacoma, Wash.; Mary Eleanor Starkey, Hartford, Conn.; Esther Q. Tuell, Tacoma, Wash.; Abbie G. Twomey, Newburyport, Mass.; Emma Varnerin, Roxbury, Mass.; Ruth Wheeler, Portland, Maine; Christina Willard, Bryant Pond, Maine; Helen Wilsey, B. A., Cass City, Mich.

SOCIETY MEETINGS

Essex North District Medical Society

May 6, 1925. Annual meeting at Lawrence.

Franklin District Medical Society

The meetings of the Franklin District Medical Society will be held on the second Tuesday of March and May.

Hampden District Medical Society

Meeting to be held on the third Tuesday in April.

Hampshire District Medical Society

The meetings will be held the second Wednesday of March and May.

Middlesex East District Medical Society

Wednesday, March 18. Harvard Club. Dr. John H. Cunningham, "Urinary Retention: Its Significance and Treatment."

Wednesday, April 15. Harvard Club.

Wednesday, May 13. Colonial Inn, North Reading.

Middlesex North District Medical Society

January 28, 1925.

April 29, 1925.

Middlesex South District Medical Society

Winter Schedule.—The plans for winter meetings of the Society include the stated meeting in April, two hospital meetings, and five meetings to be held in conjunction with the Suffolk District Medical Society and the Boston Medical Library (two surgical, two medical, and one general).

Norfolk District Medical Society

January 27, 1925. Masonic Temple. Subject: "Some Trends of Medical Teaching and Medical Practice." Speakers: Drs. A. S. Begg and W. P. Bowers.

February 24, 1925. Masonic Temple. Subject: "The Need of Periodical Physical Examinations and How to Make Them." Speaker: Dr. Francis H. McCrudden. A second speaker will be selected to present another subject at this meeting.

March 31, 1925. Tufts College Medical School. This meeting given over to Drs. Leary and Watters for the purpose of giving us a medical examiners' talk.

Norfolk South District Medical Society

Meetings will be held the first Thursday of each month to May, inclusive, at 12 noon, at the Norfolk County Hospital, South Braintree.

Suffolk District Medical Society

January 28. General meeting, in association with the Boston Medical Library and the Middlesex South District Medical Society. "Some Experiences of a Medico-legal Pathologist" (lantern slides), Dr. George B. Magrath.

February 25. Surgical Section, in association with the Middlesex South District Medical Society. "Pyelonephritis," Dr. Arthur H. Crosby.

March 25. Medical Section, in association with the Middlesex South District Medical Society. "The Treatment of Pneumonia," Dr. Edwin A. Locke.

April 29. Annual meeting. "Hypertension and Longevity," Dr. Harold M. Frost.

Worcester District Medical Society

February 11, 1925. Memorial Hospital, Worcester. Papers will be read by the members of the hospital staff.

March 11, 1925. St. Vincent's Hospital, Worcester. Papers will be read by the members of the hospital staff.

April 9, 1925. Subject and speaker to be announced.

May 14, 1925. Annual meeting.